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SURGICAL MANAGEMENT OF CARCINOMA OF THE COLON AND RECTUM*

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ACTIVE interest in the surgical management of malignancy of the colon and rectum of the past twenty years is evidenced by the large number of contributions to the literature. Anatomy, of course, has not changed, surgeons have not suddenly become expert, but improvement in surgical technic and the application of physiologic principles have increased the scope of operability, lowered the mortality, decreased morbidity, and increased curability. Allied branches of medicine such as x-ray have contributed materially to the earlier recognition of malignancy, and the renewed interest of pathologists has led to a better understanding of its spread; this knowledge has been very helpful to the surgeon in his surgical approach.

Early diagnosis, insistence on good preoperative preparation, improved anesthesia, and chemotherapy have all contributed to making the problem a much more hopeful one than formerly. From descriptions of operations performed, radical procedures seem to be the vogue, and curbed by the necessity of saving one kidney, a part of the stomach, or a part of the bladder, from an anatomical standpoint the surgeon has almost reached the limit in the eradication of malignant disease of the colon and rectum. Further benefits must come from earlier diagnosis, which obviously is lagging far behind improvement in surgical technic.

Therefore, even though this paper deals with the surgical aspect, I would be remiss if I did not emphasize again the importance of early diagnosis. I feel so strongly about it that I think it would be better for the next five years for surgeons to stop talking about surgical technic and compiling mortality and curability statistics in order to spend their time talking about early diagnosis. In the

surgery he alone knows the tragedy of the late cases when he fits the condition at hand to a history that the patient had outstanding symptoms six months to a year ago. Many of these patients, we are sorry to say, did consult physicians.

The American Cancer Society and its program for cancer control was not originated by public health authorities, governmental agencies, or any professional group but has evolved from popular demand. Let us as a group not be delinquent. With an accurate history and thorough examination we can eradicate many of our trials and tribulations.

I have always been envious of the obstetrician. Around a birth the mother is happy, the father is happy, the doctor is happy (provided he has not lost too much sleep), and for once in her life, even the mother-in-law is happy. Contrast that with cancer of the rectum—when gloom pervades—yet I can visualize a brighter picture if we were a little more practical. For instance: (1) Everyone knows that 75 per cent of all cases of cancer of the colon are located where they can be felt with the finger or easily seen with the proctoscope; (2) the roentgenologist knows that the rectum is a blind spot for early diagnosis; (3) We all know that it is easier to order an x-ray of the colon than to think.

Now suppose that the roentgenologist had to have an affidavit to make or the moral courage to refuse to do a colon x-ray before a digital and proctoscopic examination had been done. Who would be happy? (1) The patient, because it was discovered early, easily, and without much expense; (2) the doctor, in taking just pride in his accomplishment; (3) the roentgenologist, because he didn't make a mistake or cause an impending obstruction by filling the colon with barium. A few rules among ourselves may avert rules made for us by people on the outside, and we know that a lot of people are trying to do just that.

From the standpoint of surgical technic there are admittedly many different ways of accomplishing a certain operation in a certain segment of

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the colon. The one fundamental prerequisite, however, is to do as extensive and as radical an operation as possible. Whether this is done by the closed or open method, by the one-stage or two-stage method, or by any other technic makes little difference provided the surgeon can show his results from the standpoint of mortality and morbidity are equal to those of other technics. Perfecting one technic is better than trying every new procedure that is introduced unless one has an abundance of material.

While one may prefer a certain standard procedure in certain segments of the colon, the findings at operation may necessitate a variation in technic. Obstruction, subacute perforation, or fixation must alter the course of even the staunchest advocate of the one-stage procedure. Graded procedures are necessary for utmost safety in this limited group of cases. In the final analysis the main controversy in surgery of the colon revolves around (1) the one-stage or two-stage procedure and (2) the open and aseptic or closed method of anastomosis. Improvements along one line or another may cause a change of method. For instance, sulfonamide therapy may change a two-stage operator into a one-stage advocate, or the use of the Rankin clamp may cause an advocate of the open method to use the closed method. However, I think less depends on the method used than the manner of its execution. A cursory review of mortality figures in recent years shows a disparity of 10 to 25 per cent for the same operation. This disparity is probably due to the manner of execution. I have always believed that peritonitis depends not so much on soiling as on leakage at the suture line or secondary to a bad wound infection. Since this can happen in the two-stage anastomotic procedure as well as the one-stage, I prefer the one-stage procedure.

In all statistics a higher mortality is quoted for palliative anastomosis and resection than for completed cases. This probably demonstrates the importance of vitamin and plasma protein deficiency in infection and wound healing. The patient with advance malignancy is probably lacking in both of these essentials and therefore cannot tolerate a minor procedure. However, cancer is a fatal disease and operative mortality cannot be viewed in the same light as non-fatal cases. The surgeon must be courageous. His responsibility is to palliate as well as to try to cure. The decision in any individual case rests upon the surgeon's experience, his philosophy regarding malignant disease, the patient, and the lesion.

Lesions in the right colon, whether in the cecum, ascending colon, or hepatic flexure, are best treated by right colectomy, with side open anastomosis. I believe the postoperative morbidity is less than in

the group of end to side anastomosis over the Rankin clamp, as I formerly used to do. My preference in this group of cases is the one-stage right colectomy.

Formerly a small catheter was inserted by Witzel's method into the ileum about six or eight inches from the anastomosis to prevent tension on the suture line and to relieve pressure within the bowel. Lately this technic has been changed and the Miller-Abbott tube has been substituted with satisfactory results.

The great advantage of the one-stage over the two-stage procedure is economy in hospitalization and rehabilitation time, yet economy in time cannot be argued against safety. In either case these patients must have a few days of preoperative care in which transfusion is of first importance because so many have a secondary anemia. One of the greatest difficulties in resection of the right colon, particularly in the very obese patient, is peritonealization of the right gutter. Improperly completed, it will lead to adhesions and obstruction which is a definite factor in mortality.

For several years we have obviated this by use of the modified Mikulicz pack described recently. It prevents the small intestine from becoming adherent, and the postoperative convalescence is therefore much smoother. The combination of a well-prepared patient, decompression of the ileum either by Miller-Abbott tube or ileostomy tube, the use of the Mikulicz pack when indicated, the use of steel wire figure-of-eight sutures to prevent infection and disruption will, I feel confident, reduce the mortality considerably in this current series.

I have had no experience with the modified Mikulicz operation on the right colon. It has been advocated by Lahey in recent articles. Cattell reports a mortality of 3 per cent by this method in over a hundred cases. The objections to it, of course, are the same as for ileostomy in addition to the longer period of hospitalization. However, the discomfort does not last for many weeks, and if it lowers the mortality over the other operations by another 10 per cent it will become the method of choice.

The classical two-stage procedure is the side-to-side anastomosis between the ileum and transverse colon and the resection of the right colon at a later date. The objections are that (1) a person is running the risk of accidental death twice instead of once; (2) the hospital stay is greatly increased; (3), complications such as pneumonia, embolism, phlebitis, infected wounds, and so forth may delay or actually defer indefinitely the completion of the second stage procedure. Therefore, I use it only in cases where there is obstruction or perforation of the growth.

In the transverse colon one has a variety of satisfactory procedures. Ordinarily, mobilization is easy, and the blood supply is good. Mayo and Simpson report a mortality of 11.1 per cent in resection and primary anastomosis in contrast to 20 per cent mortality in 95 cases of extraperitoneal resection. Stone reports a mortality of 7.1 per cent in 14 cases by this procedure. In the past it has also been my choice. In my own 20 cases there were two deaths, a mortality of 10 per cent. In the one-stage procedure with resection, done in the manner of choice to fit the case, I believe it is important to do a complementary tube cecostomy. This is simple to do through a McBurney incision. It will lower mortality and morbidity, and does not prolong hospital stay, for if the tube is removed on the fifth or sixth day it will be closed by the time the patient is discharged from the hospital. In cases of marked obstruction, which generally is not the rule, the tube cecostomy should be done first under local anesthesia, followed in a week by resection. I thought my own mortality rate could be improved upon, and for that reason I am trying a series of Rankin obstructive resections. I have reason to believe that the mortality will be considerably lower, although sufficient cases have not been done for comparison.

If the obstructive resection technic is employed it is better to make the incision through the rectus muscle, right to left, according to the location of the lesion. The application of the spur clamp is safer, and in the closure of the stoma a better abdominal wall will result with less danger of weakness or definite hernia.

A lesion at the splenic flexure presents more difficulty than in any other segment of the colon. It generally lies very high and is frequently adherent to the spleen. In its mobilization the capsule of the spleen will often tear and give rise to very troublesome bleeding. In two of our cases the spleen had to be removed before operation could be proceeded with. In another case a gauze pack had to be placed tightly against it. I believe the obstructive resection is the best procedure here, and a left costal border incision makes it easier than a left rectus incision.

Prior to 1938 I favored resection of the sigmoid in the one-stage procedure with end to end anastomosis and frequently with tube colostomy above the growth or tube cecostomy, the present day so-called primary anastomosis. The mortality in this group, including descending colon and sigmoid in 128 cases, was 14 per cent. Even though it compared favorably with other statistics, I felt it could be improved upon. I had objected to the Mikulicz type of resection on account of the frequent post-operative hernias, and I had seen many cases of

recurrence in the scar, the cause of which was obvious.

It seemed to me that the quoted mortality in this operation was too high, also, if it was designed to do away with the most frequent cause of death, viz., peritonitis from the open operation. Consequently, I started a series of the Rankin modification of Mikulicz's procedure. It seemed to me that one could do a more radical operation with this method than with the resection and anastomosis, a thing that the Mikulicz operation did not stress and the thing which caused the local recurrence. From January, 1940, to July, 1944, the series totalled 117 cases, 61 being in the left colon. The mortality was 6 cases or 5 per cent. This definite drop in mortality seems to justify continuance of the procedure in preference to others. In this group spontaneous closure of colostomy occurred in 11 cases or 14 per cent. The total hospital stay in this entire group of cases averaged twenty-eight days. This included preoperative treatment in all cases, in 10 of which a cecostomy had to be performed for obstruction, and the hospital stay for closure of the colostomy, the latter averaging eight days. It was not necessary to do a second operation for closure in a single case.

In the literature there is no apparent unanimity of opinion as to what constitutes the rectosigmoid. I take it to be the junction between the rectum and the sigmoid, and if the rectum is 5 inches long then the rectosigmoid should be a small segment of bowel beginning at about the peritoneal reflection and extending proximally for not more than 2 inches. Most lesions at this point obviously cannot be exteriorized, yet one frequently reads about the Mikulicz operation for rectosigmoidal cancer. As a working basis I consider a lesion whose lower edge borders on the peritoneal reflection, or a segment 2 inches above it, as rectosigmoid and subject it to the same operation as those listed under carcinoma of the rectum. Lesions higher than this are termed sigmoid. Elimination of colostomy has been a dream since time immemorial.

Dixon has been advocating resection and end to end suture on lower lesions, even bordering on or below the peritoneal reflection after a colostomy has been done in preparation. Babcock has been advocating a proctosigmoidectomy, the primary purpose being to have a perineal anus with some attempt at muscular control. Time only will tell whether the mortality, morbidity, and curability justify the procedure. In the past it certainly has been untenable.

My views upon the choice of surgical procedure for cancer of the rectum have long been known. As I first believed with firm conviction, even though with temerity, I am now more than ever convinced that the procedure of choice for this lesion and

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GASTRITIS AMONG NAVY PERSONNEL*

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THE experienced clinician no longer doubts the existence of gastritis, and has accepted it as an important disease entity. However, there is still much to be learned about the abnormal gastric mucosa. Much of the confusion which envelops the subject might be clarified if it were possible to obtain an accurate correlation of clinical facts, laboratory, gastroscopic and pathologic findings.

During the late war, information of real value might have been obtained if it had been possible to carry out an accurate statistical and factual analysis of gastritis occurring among military personnel.

Certainly, many of the suspected etiologic factors; such as, fatigue, infections, food intolerance, thermal insults to the gastric mucosa, emotional and nervous trauma existed in great abundance.

In the Naval Service the medical officer, afloat or ashore, commonly attributed the multiple, unrelated complaints of the chronic gastric invalid to Gastritis. The faulty, but often appropriate, use of the term accounted for the high percentage rate of hospital admissions having the diagnosis of D. U. (Gastritis.)

This report is concerned with the known clinical facts, laboratory and gastroscopic findings in one hundred Naval Personnel hospitalized with the diagnosis of D.U. (Gastritis.)

Unless one is familiar with the peculiarities of naval medicine the term D.U. is meaningless. The Medical Department clings to the belief that the term is of value, but there are many of us who remain unconvinced. The term D.U., however, means "diagnosis undetermined." Actually it is a parenthetical diagnosis and the letters D.U. are followed by parenthesis within which is recorded the disease suspected or thought suitable for the

occasion. Thus, a medical officer who labelled a patient D.U. (Gastritis) simply implied that he wasn't certain of the diagnosis but was betting on gastritis! Regulations required that an undetermined diagnosis be eventually changed to an established one. The acceptable diagnosis were listed in the Table of nomenclature.

The accuracy of the established diagnosis would depend upon the existing facilities for differential study or upon the scientific conscience of the medical officer. Due to the scarcity of experienced gastroscopists, the patient with D.U. (Gastritis) became an established case of gastritis chiefly by clinical inference.

The problem is further complicated by factors peculiar to the Naval Service. The organization of the Medical Department is a very fluid one. The prolonged close association of doctor and patient rarely occurs as both Medical officers and patients are constantly shifted from one activity to another. This shuffling about of doctors, patients and clinical records did not afford the Medical officer an opportunity to carry out a detailed study of group cases. The usual health record would contain numerous clinical impressions and changes of diagnosis, and would more often be confusing than helpful. Thus, any discrepancy between the facts and impersonal statistics may be readily understood.

The chief complaints or additional subjective symptoms which suggested the presence of Gastritis in the group studied, were as follows—of 32 patients having proven Gastritis there were 21 who complained of vomiting, 30 of continuous epigastric distress, 11 of severe pyrosis, 14 of excessive flatulence, 11 of hematemesis, and 13 couldn't tolerate the usual Navy diet.

Of 68 patients without Gastritis, there were 35 who complained of nausea, 45 of epigastric or mid abdominal distress, 36 of vomiting—usually occurring during or shortly after a meal and often before the morning meal—15 of pyrosis, 23 of distressing flatulence (designated by their shipmates as "ward belchers") and 28 couldn't tolerate or bear the sight of Navy food. Hematemesis of undetermined origin had occurred in 3 of this group.

Gastric Analysis revealed among the gastric group, a hyperchlorhydria in 12, normal free acid values in 18, and hypochlorhydria in 2. In the

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group without Gastritis there were 25 showing hyperchlorhydria, 40 having a normal free acid range and hypochlorhydria was present in 2.

Barium progress studies were essentially normal. Unsuspected ulcer duodenum was demonstrated in two cases, but the usual finding was that of pylorospasm, gastric hypertonus and the irritable colon syndrome.

The gastroscopic picture was consistent with atrophic hemorrhagic gastritis in 9 cases, hypertrophic hemorrhagic gastritis in 2, simple atrophy in 15 and simple hypertrophic changes in 6.

The average patient age was 19 years. In as much as the group consisted of Naval, Coast Guard, Marine and Construction Battalion personnel the actual patient age varied greatly. All members of the group had served from 6 to 20 months in the South West Pacific and many had taken part in combat with the enemy.

The group as a whole presented the appearance and objective findings common to personnel who had spent many months in the Tropics—they were physically and mentally tired, weary of war, had lost weight, and the "jumpy" nerves of combat or occupational fatigue was apparent. The usual laboratory findings were secondary anemia and multiple intestinal parasites.

Although the incidence of individual symptoms have been enumerated, the percentage occurrence of any one symptom, with the exception of hematemesis, does not appear to have any actual clinical significance. It was the rule for patients to complain of multiple symptoms, the most frequent combination being, nausea, "heart burn", epigastric distress, flatulence and vomiting. Subjective symptoms did not follow any particular or specific pattern.

It has long been known that erosions and superficial ulcerations of the gastric mucosa occasionally produce hemorrhage. Blood occurred in the vomities of 11 or 32% of the patients having Gastritis. In no instance was bleeding profuse or fatal. Patients usually stated that they noticed the presence of blood during a bout of retching. However, an appreciable volume of fresh blood was found in the fasting secretion of five of the patients with Gastritis.

The gastroscopic picture of the 9 patients classified as atrophic hemorrhagic gastritis was interesting and perhaps unusual. There were patchy areas in which the color of the mucosa was a dirty greyish white or purple, with submucosal vessels well defined. The bleeding areas consisted of one or more small, circumscribed lesions, about the size of a dime and presenting a peculiar but striking "moth eaten" or slough-like appearance. They were most frequently seen high in the stomach below the cardiac shelf and usually involved the posterior

wall. It was a common experience to discover small drops of blood oozing from the necrotic central area.

Although the general process was one of atrophy, the bleeding lesions were not consistent with the appearance of simple mucosal erosions, hemorrhagic submucosal flares or ulcerations.

We have seen similar lesions in 2 patients who were hospitalized for profuse hematemesis following an underwater blast injury to the abdomen. Both patients had been blown into the water and again literally blown out of the water by an underwater explosion. Gastroscopy demonstrated the presence of freely bleeding, spongy, moth eaten circumscribed patches similar to those already described.

Therefore it has occurred to us that the hemorrhagic lesions found in our cases may actually have been produced by trauma. More than half of the Gastritis patients were chronic "retchers". It was common for them to vomit their partly digested meal while enroute from the mess hall to the wards. The possibility of traumatizing an already damaged mucosa by the mechanics involved in retching or vomiting does not seem illogical.

Contrary to the usual finding, atrophic gastritis occurred in more than half of our cases. The reason for this is not known. The exact nature of gastric atrophy is still an unsettled problem. There may be different forms of atrophy; in some instances it may represent the end stage of an inflammatory process and constitute a true Gastritis, while in other cases it may represent a nutritional atrophy resulting from a constitutional disorder or deficiency state.

In our experience dietary and constitutional factors were, at least, important contributing factors. The importance of psychosomatic influences on gastric function has again been demonstrated by the painstaking observations of Wolf and Wolff.¹ By means of a gastric fistula they were able to observe the changes in color and vascularity of the mucosa, and appearance of the rugae induced by varying emotional stimuli. Schindler and Murphy² also mention the frequency of constitutional symptoms among patients having atrophic gastritis. In a thorough review of the general subject of Gastritis Bockus³ states that clinical and laboratory evidences of Gastritis may be found in the absence of symptoms and that the appraisal of complaints in Gastritis is extremely difficult at all times.

As the result of our own experience we believe that it would be difficult to deny the importance of fear and fatigue as contributing etiologic factors in the patients we have studied. Some degree of hypochronic anemia was invariably present. However, an anacidity or depressed gastric secretion

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was an uncommon finding. The diet of Naval personnel in the South West Pacific was no doubt adequate from the nutritional standpoint but the tired and sensitive stomach of the war weary individual simply rebelled against the monotony of careless preparation, of spam, rice, beans, egg powder, dehydrated potato, and "butterless butter".

The treatment of these patients consisted of bed rest, sedative-antispasmodic remedies; whenever possible a bland diet, parenteral and oral vitamins, iron, eradication of intestinal parasites, and mental hygiene. The persistent "retchers" were ward fed but even supervision was not always successful, and the intractable patients would continue to lose their meals. It soon became apparent that the abnormal gastric membrane was only a part of a constitutionally sick individual, and whenever time and facilities permitted, psychiatric consultation and treatment was requested. In 7 of the patients with atrophy the mucosa regained a normal appearance. The remaining 25 patients were considered unfit for further duty and were transferred back to the United States. However, we were not convinced that their damaged gastric mucosa was responsible for their prolonged disability. Of the non-gastritis group 36 were returned to duty, but the profound emotional and functional disturbance of the remaining 25 required further hospitalization in the United States. Later studies showed that 57 of the entire group were eventually separated from the Naval Service.

The disposition of the sick is of paramount importance in the Naval Service. A man not capable of performing the duties of his rate is often a liability to the ship and of little value to a shore command. The frequency with which Gastritis was found among our 100 patients would imply a rather high rate of Gastritis occurring among those patients termed "chronic gastric invalids". However, the fact remains that the majority of such individuals suffer from functional disturbances, rather than organic disease. We believe it is extremely difficult to properly evaluate symptoms versus gastroscopic findings. Nor do we feel certain that a gastric mucosa damaged by emotional, nutritional or other agents is the sole cause of a prolonged disability.

The problem is particularly difficult in wartime, because the physician dealing with combat personnel must not only endeavor to appraise the existing disease, but must also consider the individual's ability and willingness to return to duty. When the evidence of gastritis no longer exists but subjective complaints persist, the ability of the individual to perform further useful service is in doubt.

Perhaps, with sufficient planning and foresight, it would have been possible for personnel with

gastritis, functional disturbance of the gastrointestinal tract, and chronic peptic ulcer to have performed valuable service. But inasmuch as that utopia of organization was never attained, most of these unfortunate individuals would have served their country best—at home.

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those in the rectosigmoid, as I interpret it, is the one-stage abdominoperineal resection, the Miles operation. It offers the best hope of cure, the lowest mortality and morbidity, and the greatest palliation of all procedures. In a series of cases, the mortality is 7.2 per cent. From October, 1941, until June, 1943, we completed 137 consecutive cases without a single fatality.

It must be apparent from this number that bad risks were given a chance as well as good risks. The patient in 8 cases had liver involvement at the time of operation. Twenty-five had arteriosclerotic heart disease with hypertension; 5 had coronary heart disease; 4 had diabetes. Twenty-seven had had previous abdominal operation, which, in general, is a complicating factor. The total hospital stay in this entire group averaged twenty-two and one-half days and is now fifteen days. There were no disruptions and only three abdominal wounds were infected. Attention has been called to this before and has been attributed to the figure-of-eight alloy steel wire closure. Elimination of infection reduces mortality and morbidity to a very low percentage, which in turn increases the scope of operability. To include those with metastatic lesions will, of course, decrease the curability rate. That makes little difference. We will make more people comfortable for a longer period of time.

PROVIDENCE MEDICAL ASSOCIATION

Next Regular Meeting

MONDAY, OCTOBER 7

THE CONSERVATION OF PULMONARY FUNCTION IN THE TREATMENT OF CHEST CASUALTIES*

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THE treatment of chest casualties may be conveniently divided into two phases. The profound physiologic disturbances that occur following the injury urgently demand early consideration. After this phase many casualties demand further care because of retained foreign bodies, a persistent hemothorax or an empyema, any one of which may seriously compromise pulmonary function. It is this second phase that will be considered in this paper. The opinions expressed are largely the product of experiences gained at the Thoracic Center in the Central Pacific.

The general principles of the early emergency treatment of chest wounds may be summarized as early and adequate control of hemorrhage and shock; the closure of any sucking wound by an occlusive dressing or by debridement and suture; early treatment of tension pneumothorax; and early and complete aspiration of any hemothorax and/or pneumothorax. An elaboration of these principles does not fall within the scope of this discussion.

Pulmonary function is seriously disturbed following most intrathoracic wounds. Attention has long been focused on the treatment of the chest wound and any resultant pleural space complications. One of the outstanding developments in this last war has been a shift in the objective of treatment to the lung and the conservation of its function.

The sequelae of the inadequately treated hemothorax are the chief causes for the embarrassment of pulmonary function following chest wounds. These sequelae are clotted hemothorax and empyema.

It is now generally agreed that the best treatment of the acute traumatic hemothorax is early aspiration of all the blood that can be obtained. Specifically this means aspiration, within 48 hours of injury, of any chest which has an appreciable amount of hemothorax. Aspiration should be re-

peated at intervals of 24 to 48 hours until the pleural cavity is dry, or more frequently if needed to relieve respiratory distress. It has been suggested that the hemothorax should not be aspirated early due to the danger of reactivating bleeding but the experience during this war has failed to confirm these fears. The replacement of aspirated blood with air to control hemorrhage is also condemned. It is not necessary for controlling hemorrhage and if an infection develops the result will be a total instead of a basal empyema, due to the induced pneumothorax. If hemorrhage continues, it is usually from the chest wall and rarely from the lung. In either case, a limited thoracotomy may be required to control it. The objective in these cases is the early restoration of pulmonary function, by aspirating all blood or air, thus completely re-expanding the lung. The majority of hemothoraces will respond well to this treatment with very little residual deformity.

If the hemothorax is not completely aspirated an unpredictable amount of it may be naturally absorbed over a period of several weeks. It is not sound practice to depend upon absorption for there are a considerable number of cases (about 10%) in whom the hemothorax "clots". This clotting may begin as early as a few days after the injury by the deposition of fibrin on the pleural surfaces. Within a few days this fibrin is invaded by fibroblasts and arterioles from the pleura. After a few weeks, a dense inelastic membrane results which holds the lung in a state of partial collapse. The degree of the collapse depends upon the amount of hemothorax (and pneumothorax) present at the time the membrane became thick and inelastic. Eventually the clotted hemothorax becomes organized which leaves the casualty with a markedly deformed, so-called "frozen chest". Unless treated, this situation will persist for life, leaving a definitely diminished vital capacity and a deformity of the thoracic cage.

At the same time that the fibrous membrane is being formed over the pleural surfaces the remainder of the hemothorax frequently clots and becomes loculated making aspiration much more difficult. However, aspiration should always be attempted until it is obvious that it will not restore the lung to a position of essentially normal func-

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tion. In aspirating this type of hemothorax it should be remembered that fibrin settles to the bottom of the fluid. When difficulty is encountered in aspirating, the needle should be inserted one or two interspaces higher and frequently large amounts of fluid may then be withdrawn. Some of the "jelly-like" clots may be aspirated through large bore needles, such as a 15 gauge needle. Even though aspiration be successful, the inelastic membrane over the visceral pleura retards and may prevent the reexpansion of the lung.

During the period that the hemothorax is being aspirated the patient should do specific remedial breathing exercises which teach him to control voluntarily the unilateral and segmental respiratory activity of the poorly functioning region of his thorax. The importance of this has been stressed by Harken.

If definite improvement in expansion of the lung and mobility of the diaphragm and chest wall is noted then aspiration and breathing exercises should be continued until the chest is dry and function is restored. However, those casualties that have large clotted hemothoraces with fluid that cannot be successfully aspirated or lungs that will not expand following two or three weeks of aspiration, are best treated by thoracotomy, the manual removal of the clotted hemothorax and, if necessary, decortication.

Decortication was first used by Fowler in 1893 for chronic suppurative disease. This very valuable procedure has enjoyed a somewhat limited use until recent years due to the need for improved methods of anesthesia, blood transfusion and bacteriostatic agents. In this last war, the potentialities of decortication have been realized and used in all theatres.

Decortication is the removal of the thick constricting capsule of organizing fibrin which forms over the surface of the lung, thus permitting its re-expansion. The procedure is accomplished by using the typical postero-lateral incision and resecting a portion of the sixth or seventh rib. The periosteal bed is incised and the pleural cavity entered. All fluid and the jelly-like clots of the organizing hemothorax are removed. An attempt may then be made to expand the collapsed lung by means of positive pressure (about 8 to 10 cm. of water) from the anesthesia machine. If this is unsuccessful because of the constricting fibrin capsule over the surface of the lung a decortication is done.

Usually over the lateral portion of the lower lobe a point is selected to enter the fibrin capsule. Blunt dissection is used and a line of cleavage is established between the fibrin capsule and the visceral pleura. As soon as this is accomplished the fibrin capsule is grasped with a forceps and the visceral pleura is then wiped away from it with

relative ease. This procedure is used to free the entire surface of the lung, except in those areas where there has been trauma causing scar tissue or in those cases where the organized fibrin has been allowed to remain so long that it has become too firmly adherent to some portions of the pleura. The underlying pleura is smooth and almost normal in appearance. The organized fibrin is stripped away from the costo-phrenic angle and the diaphragm. The lung is completely freed from the thoracic wall and mediastinum and the lobes of the lung are separated from each other if not too firmly adherent. No attempt is made to remove the organized fibrin from the parietal pleura since the procedure is accompanied by greater technical difficulties and more bloody oozing than is warranted by the small increased benefit derived. At the end of the procedure the pleural cavity is irrigated with saline to wash out all blood clots and to detect the presence of any broncho-pleural fistula that should be closed. A drainage catheter is inserted through a stab wound. The lung is completely inflated and the wound closed in layers. Encircling pericostal or perichondral sutures should not be used. Following closure all air is aspirated through the chest catheter to insure maximum reexpansion of the lung.

Post-operatively penicillin is given routinely. Breathing exercises are initiated as soon as the patient is able to execute them. The drainage catheter in the chest may be placed in a water seal drainage bottle or on controlled suction (10 to 15 cm of water) and removed when it ceases to function. Following removal of the drainage catheter a small accumulation of sero-sanguinous fluid frequently occurs. This will usually become absorbed. If there is an appreciable amount it should be aspirated.

The optimum time for doing a decortication appears to be between the third and sixth weeks following injury. If done before the second or third weeks the fibrin capsule over the lung is friable and hard to remove. If done after the tenth to fourteenth weeks it is tough and densely adherent to the pleura.

Experience with this procedure has indicated that in the majority of cases very satisfactory results are achieved. The patient is given a lung that has almost complete restoration of function.

A brief summary of a typical case and the results obtained will be of interest.

A 22 year old enlisted man received a penetrating .25 cal. bullet wound of his left chest on 7 April 1945. He was evacuated to a Field Hospital 9 hours later where he was given 2000 cc of blood and 500 cc of plasma. His wound was debrided and he was found to have two fractured ribs. On 12 April a thoracentesis was done aspirating 1000

cc of blood. Eight days after his injury he was evacuated to a Station Hospital in the Marianas where he was given 2000 cc of blood. Two more thoracenteses were done, 950 cc. of blood being aspirated on 23 April 1945 and 50 cc. of blood on 24 April 1945. He was evacuated to this General Hospital 8 June 1945. At that time he had a large clotted hemothorax that would not yield to aspiration. Accordingly on 13 June 1945 a thoracotomy and decortication was done. About 1000 cc. of thin brown fluid was removed along with several large jelly-like clots. A dense fibrin capsule which prevented expansion of the lung was also removed. The lung reexpanded well and the patient's post-operative course was uneventful. At the time of discharge 38 days later there was only slight dyspnea on moderate exertion and slight limitation of expansion of the left side of his chest on inspiration.

The development of infection in a hemothorax is a serious complication which demands prompt treatment. A common source of infection is direct extension of infection into the pleural cavity from an infected wound. This is seen particularly in those cases with large wounds requiring muscle flap closures. Contamination may be introduced by the metallic projectile, particularly large jagged fragments that lodge within the chest. Less common causes of infection are broncho-pleural fistulas and the carrying of abdominal contents into the chest in thoraco-abdominal wounds. Either aerobic or anaerobic organisms may cause the empyema.

The treatment of an infected hemothorax may be different from the post-pneumonic empyema for several reasons. There is usually a thick fibrin capsule covering the pleura which limits the ability of the lung to reexpand. The hemothorax when infected may clot and pocket which makes drainage difficult. If the hemothorax is large a total empyema is formed.

The post-traumatic empyemas are treated with the objective of obtaining early and complete re-expansion of the lung as soon as possible. Small empyemas arising from a clotted hemothorax, that are well localized and have an underlying lung that is not limited in its ability to fully expand, thus obliterating the cavity, may be treated by open drainage. This method is also excellent for the extremely sick patient with a massive empyema whose condition permits only simple non-shocking surgical procedures.

The treatment of empyemas by decortication is designed for those cases that have had a large clotted hemothorax, which has become infected, and in whom there is a layer of organizing fibrin on the surface of the lung which would prevent its expansion. Simple drainage of this sort of em-

pyema would leave a large chronic empyema cavity that would at best require many months to become obliterated. Furthermore, the clotting that makes aspiration unsuccessful also is likely to interfere with proper drainage of the empyema. If the patient is in condition to stand the shock of a decortication, he will in most instances, have a fully expanded lung and the empyema will be cured within a short period of time.

Preliminary aspirations should be carried out with the instillation of penicillin into the pleural cavity temporarily sterilizing, if possible, the infected hemothorax. As soon as the patient has been adequately prepared, a thoracotomy is done, all pus and fibrin clots are removed and a decortication is done. In all cases a drainage catheter is placed through a stab wound and after the chest has been closed 50,000 units of penicillin are instilled through the catheter which is then left clamped for three hours. Otherwise the postoperative care is the same as that noted for decortication of the uninfected hemothorax. Occasionally small empyema pockets form following a decortication for empyema. These usually respond well to open drainage.

The dramatic results that can be achieved are illustrated by the following typical case.

On 13 April 1945 a 21 year old enlisted man received a severe high explosive wound of his right chest, entering at the base of the right side of his neck and lodging in his right lung. This produced a sucking wound which was closed four hours later by the application of a vaseline gauze pack at a Field Hospital. Two days following the injury he received a thoracentesis which was repeated approximately every second day for two weeks; a total of about 1900 cc. of blood being aspirated. He was admitted to this General Hospital 25 May 1945, 42 days following injury, with his right chest filled with purulent fluid. He received aspirations on 25 May 1945, obtaining 900 cc. of creamy pus; on 26 May obtaining 875 cc. of pus; and again on 28 May obtaining 600 cc. of pus. *Staphylococcus aureus* was grown on culture. Following each aspiration 50,000 units of penicillin were instilled. X-ray of his chest demonstrated a total collapse of his right lung which would not reexpand following aspiration. Therefore, a decortication was done 2 June 1945 and the metallic foreign body removed. A large amount of thick greenish pus and jelly-like clot was removed. The lung was almost totally collapsed and covered by a thick layer of dense organizing fibrin. Following decortication the lung reexpanded well. An inlying catheter was inserted and 50,000 units of penicillin were instilled. He received 25,000 units of penicillin intramuscularly every three hours post-operatively. This patient's course was excellent with rapid recovery. He had

continued on next page

progressive and very satisfactory clearing of his lung field on the right as noted by serial x-rays. He was ready for discharge seven weeks later and could do all but strenuous duty. There was only a slight decrease in expansion on inspiration on the right and partial obliteration of the costo-phrenic angle.

Some infected hemothoraces do not have frank pus as illustrated by the following case. In this case the cause for the infection appeared to be a wound of entrance which was not successfully closed.

A 23 year old enlisted man received a severe penetrating high explosive wound of his left chest on 10 April 1945, which entered in the region of the 12th rib, approximately 6 cm. to the left of the midline. This produced a sucking wound which was not relieved until about six hours later at a Battalion Aid Station, where a tight adhesive dressing was applied and he was given one unit of plasma. He was then evacuated to a Field Hospital where the wounds were debrided and a vaseline gauze pack was placed over the chest wound. A laparotomy was done at the same time because of a suspected penetration of the diaphragm but this proved to be negative. Five days later he was evacuated to a General Hospital on Guam, where an x-ray showed a massive hemothorax. On 6 May 1945, 26 days following the injury, the first thoracentesis was done, obtaining 30 cc. of bloody fluid, and 11 days later a second thoracentesis was done, obtaining 500 cc. of bloody fluid. A chest plate at this time showed only slight improvement. On 24 May 1945 a delayed closure of the wound was attempted, but two days later this broke down due to spontaneous drainage of much fluid from the left pleural cavity. This drainage continued until the time of admission to this hospital on 6 June 1945, 57 days following injury. On admission he had a partial left hemothorax which was draining through the wound of entrance and a large metallic foreign body located in the left pleural cavity. Only small amounts of cloudy brownish fluid could be aspirated. *Staphylococcus aureus* was grown on culture. On 9 June 1945, almost 9 weeks following his injury, a thoracotomy, decortication and removal of the foreign body was done. The lung was about three-quarters collapsed. Much cloudy brownish fluid and jelly-like clots were removed. A thick fibrin capsule was dissected from the visceral pleura and a metallic foreign body measuring 2.8 by 1.3 by 1.0 cm. was removed. Technically the procedure was not particularly difficult and the lung expanded well following decortication. The sinus leading from the left pleural cavity through the wound of entrance was noted and admitted the tip of the small finger. This was closed with a suture. A drainage tube was inserted through a stab wound. The postoperative course

was uncomplicated and he showed satisfactory progress in the clearing of his chest as demonstrated by x-ray. At the time of discharge 44 days following the operation he was able to do all but strenuous activity. The x-ray showed some thickening of the pleura and some obliteration of the costo-phrenic angle but otherwise the lung field was essentially clear.

A conservative attitude should guide one in deciding upon the removal of foreign bodies from the thoracic cavity. The operative risk and the probability of returning the casualty to duty should always be balanced with the complications which the foreign body may cause in the future, that is hemorrhage or suppurative disease of the lungs or pleural cavity. This is particularly true for overseas installations where in general elective surgery is not done for battle casualties. If a foreign body is to be removed, however, and its removal will allow the patient to return to duty and/or is not inconsistent with the evacuation policy of the theatre, then it is desirable to have the period of recovery from the operative procedure coincide with or overlap the period of convalescence for the injury.

Before considering removal one or more of the following criteria for removal should exist. Hemoptysis is a definite indication for the removal of a metallic foreign body, if other diseases such as bronchiectasis or tuberculosis can be ruled out. Another criterion is infection of the tissues about the foreign body as demonstrated by x-rays. Foreign bodies lying in empyema cavities, if obtainable without too much effort, should certainly be removed. It is hard to determine on the basis of size and shape of a foreign body, whether or not it should be removed, because of the fact that the location of these foreign bodies in relation to vital structures governs to a degree the harm that the foreign body may cause. However, in general, it is felt that a foreign body 1.5 cm. in diameter or larger should be removed. The more jagged the outline of the foreign body, the more likely it is to have carried in pieces of clothing and other foreign substances, thus establishing potentialities for infection. The symptoms of pain and cough are very difficult to evaluate. Unless the foreign body is at the periphery of the lung impinging on either the pleura or the diaphragm these symptoms are more frequently due to adhesions or nerve involvement in the chest wall than to pathology immediately surrounding the foreign body. Psychosomatic factors should eventually be considered but this criterion should be reserved for special evaluation in thoracic centers on the Mainland.

The foreign body should first be carefully localized by anterior-posterior and lateral x-rays. A fluoroscopy is most helpful in many cases. In cer-

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COMMUNITY LEADERSHIP

RECENTLY one of our "throw away" magazines had the story of a physician made president of a university. This seems unusual. Ray Lyman Wilbur is the only other one that comes immediately to mind though doubtless there are a few others. Even our medical schools are not headed by their own products since they are only appendages to academic organisms.

Not only are physicians seldom presidents but they seem to be conspicuous by their absence on boards of trustees or other governing bodies. A striking example near at home is afforded by Brown University. Soon after the Civil War Dr. W. W. Keen was made a trustee and later a fellow. The whole-hearted, enthusiastic and skilled service that he gave for many years might have suggested that more of his breed be used. But we believe that never since has a medical man been a Solon at the college on the hill. It would be easy for us to make a list of physicians, loyal Brown graduates, who would have brought much needed attributes.

Possibly the first source from which the boards have been filled has been successful business men. Shrewd traders, hard drivers, but not at all necessarily repositories of educational wisdom. And the lawyers who are notoriously the governing class

are by the very nature of their work special pleaders. Imagine their considering each case on its merits and then insisting on working on the side where they felt truth lay! But this is exactly what good physicians are always doing. With every desire in the world to consider a case benign they will never cease in their efforts to show malignancy if it is there.

Such a customary viewpoint and such training should make medical men invaluable counselors. Why are they so seldom called upon? We believe it is explained largely by a remark of Sir William Osler, "Medicine is a jealous mistress. She will brook no rival!" Who would want to use a surgeon who had to pass half his year in legislative halls? One general practitioner was governor of Rhode Island, but still the conviction holds that the good physician must make that his life work.

Since writing the above, we have read the address at San Francisco of Dr. Roger Lee, President of the American Medical Association. It is pleasant to find that our weak gropings to express an idea have brought us somewhere near the conclusion which this clever man expresses so well. We conclude with an extract from his remarks.

"I believe he (the doctor) is entitled to a seat and a voice at the council table and not in the next

continued on next page

room as a possible expert or specialist. I believe the local community, the state, the nation and any congress of nations would benefit by his advice on public matters. Today he is almost automatically excluded, and thereby the world suffers. Furthermore for its own interests, which are so peculiarly altruistic, the medical profession needs a voice at the council table. No other group is more unselfish and altruistic in its traditions and aims than medical men. And yet in a recent unofficial and voluntary conference on world affairs no doctor of medicine was present in the throng of lawyers, clergymen, editors, social scientists, physical scientists, commentators and others.

"Why this exclusion from public and world affairs? I have suggested the trite and time worn explanation that the doctor is occupied and engrossed in purely professional matters. But certainly doctors have attained standing in poetry, music and the creative arts. They can hardly be accused of a constricted horizon. Somehow for the benefit of the general public and of the world and for the benefit of the medical profession itself this situation ought to be remedied."

ONE ORGANIZATION — THE AMA

No meeting of the House of Delegates of the American Medical Association in recent years has been marked with such agreement of purpose and unanimity of decision as that held recently at San Francisco. We are encouraged by this demonstration, and we hope we see in it clear-cut evidence of a concerted movement at last towards solidarity in the parent organization that will dispel the criticisms that have mitigated against the profession in general in the recent past.

The creation of a new public relations division with an executive director who will also be administrative assistant to Dr. George Lull, secretary and general manager of the Association, has been construed widely as a step to divorce Doctor Fishbein from his role of spokesman for the profession and to restrict him to his duties as editor of the JOURNAL and allied publications. But the action has a far greater significance as we view it.

It has been generally agreed that the medical profession has been put in a bad light by those who have fault to find with the distribution of medical care, and who have spared no efforts in their attempts to socialize medicine. Also, by its failure to tell its side of the story effectively and accurately, organized medicine has been kept on the defensive in the current debates that have culminated in the proposal of national legislation for compulsory health insurance.

At its meeting last December the House of Delegates authorized the Board of Trustees to engage the services of an outstanding public relations group

to survey the framework of the AMA, and to advise it on how to improve its programs. The unbiased report of this public relations authority, submitted to the Trustees, and revealed in part to the House of Delegates last month, resulted in the action for a new division in public relations, and also in the re-organization of the Bureau of Medical Economics under the supervision of outstanding full-time economists.

However, what was not clarified was what is to be the relationship that is to exist with the National Physicians Committee and similar agencies that have established programs for the promotion of medical public relations, now that the AMA is to have its own division to carry on this work. The issue was sidestepped in the public discussions, although from reliable sources it was reported that the study submitted to the Trustees cited the necessity for the Association to divorce itself from such groups and to handle its own public relations activities.

We in Rhode Island have long maintained that the American Medical Association is the national organization that has our support. We are the one state in the country that has not been organized by the NPC. Not that we are opposed to what the NPC is trying to do, but rather that we feel the same work can be done better locally by our own society, and better on a national level by the AMA.

Two years ago we stated editorially on this question that "It has probably been the failure of the State medical societies to instruct properly their delegates, and the subsequent failure of the delegates clearly to enforce the viewpoint of the majority of the profession that has contributed to the misunderstandings and conflicts in opinions that have been rampant throughout the profession relative to the parent organization. The remedy is apparent, and it is not the creation of new associations."

The diagnosis has been made by the public relations authority employed by the Trustees. A remedy has been prescribed by the action of the House of Delegates. The patient will be studied constantly for improvement.

THE PROVIDENCE TUBERCULOSIS LEAGUE

The people of Providence, physicians and laymen alike, have every reason to take pride in the accomplishments of the Providence Tuberculosis League. It is outstanding among organizations of its kind in the United States. It is very fortunate that an organization of such importance has had the splendid leadership under Dr. Pinckney to instill the feeling of confidence and popularity that has been demonstrated by its record. During the year 1945, 19,405 x-rays were taken and innumer-

able chest examinations done by the shorthanded staff. The list of referring doctors reads much the same as the telephone directory of Physicians and Surgeons in Providence with the omission of those doing x-ray work exclusively and the addition of many names outside Providence. We doubt if any greater accomplishment has been achieved by any comparable organization. It may be taken as practically 100 per cent confidence by the doctors of the city.

It is most encouraging that such support is given by the doctors toward the cause of discovering Tuberculosis early, when it can be readily treated. That this has resulted in the discovery of many early cases is shown by the fact that almost 70 per cent of those who were found to have pulmonary tuberculosis were still in the minimal stage and only 14 per cent far advanced. Encouraging as this may be, there is a dark spot in the system. The question is what happens to these minimal cases after they are discovered? Certainly they do not all go to sanatoria or there would be a considerably higher percentage of minimal cases admitted than there are now. True, some are able to receive satisfactory treatment at home, but all too often they drift from under the eye of medical supervision into a moderately or far advanced stage and then too late awaken to the seriousness of the condition and swell the percentages of advanced disease filling our institutions, a wonderful opportunity lost. And it is a wonderful opportunity. What other chronic serious disease that commonly attacks young adults is curable in any stage? The Providence Tuberculosis League finds the disease, but it is up to the referring physician, the man who knows the patient to do all in his power to see that proper treatment is carried out. True, this may demand imploring, persuading, brow-beating, but what can be more worthwhile than saving a life from premature snuffing?

Not only does the Tuberculosis League receive patients referred by private physicians, but with its mobile unit it has done pioneer survey work in Providence. This unit travels to industrial plants and other places where large groups volunteer for or request chest x-rays for screening purposes. This should in the future be a universal procedure. The returns are high. During 1945, a little more than 90 per cent of the cases found by this means were in the minimal stage. The method is still looked upon with some suspicion and fear by certain groups representing the laborer and others representing management, but its value is proven and it is but a matter of time before routine x-raying will be as generally done as is vaccinating against serious infectious diseases. The longer it is delayed, the longer will tuberculosis be a plague on both your houses, labor and management. It is

one of the foibles of human nature that it will demand tremendous outlays of money, time, equipment, personnel, sympathy to take care of disabling diseases, but won't ask an iota or lift a finger to help prevent these diseases. If a small fraction of these items that are spent or are contemplated being spent on prophylactic measures and early treatment, our government could worry about finding some other way to spend our money.

The Tuberculosis League is showing us the way, backed by the doctors of Providence, but we must double and redouble our efforts and our backing. It seems to us quite unique the popularity with which the lay public holds the League. It seems to have none of the onus that surrounds many other public and especially tuberculosis organizations. People visit and revisit this clinic and come out satisfied. This can only prove that they are handled with efficiency and respect. A model is set from which clinics could take heed.

CEREBRAL PALSY

An article in a recent number of the JOURNAL presents a comprehensive description of recent advances in the understanding and treatment of children suffering from cerebral palsy. There is already widespread interest in this subject throughout the country and centers for providing the proper medical and educational facilities for such children are being established in a great many cities.

Rhode Island physicians are probably aware that this State at the present time lacks adequate facilities for handling this problem. From 1931 until 1942 a residential treatment unit for children with cerebral palsy was maintained at the Bradley Home but it was discontinued as the work of this hospital developed in other directions. It will doubtless interest the medical profession that some months ago an informal committee made up of representatives of various welfare agencies in the Providence area undertook to investigate the possibilities of improving local facilities. In February of this year the Health Division of the Providence Council of Social Agencies initiated a series of meetings and conferences to discuss the problem further and published in mimeographed form a survey covering the problem and lack of present Rhode Island facilities. In this report a statement from the Division of Crippled Children, Rhode Island State Department of Health, notes that 157 individuals with cerebral palsy were known to the Division on that date, almost all of these being individuals under 20 years of age. It is quite likely that the true number is much larger. At the present time the Council is accumulating information as to what may be done for such patients in Rhode Island in terms of what

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is being done elsewhere. The Division of Crippled Children is conducting a new survey to register all such patients in the State so that the actual magnitude of our problem may be known. A tentative proposal has been made that an independent day-school project for a selected group of these children be established in the Providence area on a demonstration and research basis. The core of a treatment program must be physiotherapy, but medical study and treatment, academic education, social training, and the guidance of parents and families who must care for these handicapped children when they are not in school are important features which should be included.

The physicians of Rhode Island will be interested in this project not only because it will eventually furnish much better service for their patients with cerebral palsy, but also because it will re-establish within this State an up-to-date training center where much that is new and valuable may be learned and disseminated to all communities of this State and elsewhere. The interest already shown by a small group of physicians and a larger group representing the various welfare organizations is greatly to be commended and deserves the hearty backing of all readers of this JOURNAL.

7th ANNUAL INDUSTRIAL HEALTH CONGRESS

At a meeting held in San Francisco last month, at the time of the AMA sessions, representatives of the Council on Industrial Health, the U. S. Public Health Service, and the Council of the New England State Medical Societies furthered plans for the 7th annual Congress on Industrial Health to be held in Boston the week of September 30. Headquarters for the meeting will be at the Copley-Plaza hotel.

The plans now under way call for preliminary meetings of committees and council on September 28 and 29, with the Congress officially opening on Monday, the 30th, with the morning meeting given over to a symposium on lead poisoning. An all afternoon surgical conference will share honors with a discussion for interested groups on "The Foot in Industry." A state society dinner and conference will climax the first day's program.

Tuesday's meetings will be highlighted by a morning symposium on problems in industrial medicine from the viewpoints of labor, management, and medicine. Elective conferences are planned for the afternoon on industrial physiology, administrative methods, aviation medicine, and workmen's compensation. A Pan-American dinner and conference will be held in the evening.

On October 2, Wednesday, the morning symposium will highlight medicine and industry in a

RHODE ISLAND MEDICAL JOURNAL

physico-chemical age, and the afternoon discussion will be given over to physical fitness program in industry, with the Bureau of Health Education of the AMA contributing some interesting data. A public dinner highlighting health and welfare leaders in industry will be held in the evening. On Thursday, October 3, a therapeutics conference will be conducted in co-operation with the AMA Council on Pharmacy and Chemistry.

The meeting in Boston this year will mark the first time that the Congress on Industrial Health has ever been held outside of the city of Chicago. Responsible in no small measure for bringing the Congress to New England, the most highly industrialized area in the world, has been the recently organized Council of the New England State Medical Societies composed of representatives from each of the state medical associations in this region.

FEDERAL SECURITY AGENCY Washington

Procurement and Assignment Service

June 10, 1946

William P. Buffum, M.D., Secretary
Rhode Island Medical Society
122 Waterman Street
Providence, Rhode Island

Dear Dr. Buffum:

For practical purposes the functions of the Procurement and Assignment Service have been terminated and the activities of the several State offices brought to a close. The success of the program in meeting the needs of the armed forces without sacrificing the civilian population may be attributed directly to the patient and timeless devotion of many State Committees and countless local advisers. Many of these Committee members and advisers are unknown to the Directing Board, except through the results of their efforts, and it would obviously not be practicable to undertake to communicate with them.

In a recent letter to each State Chairman, I asked that the appreciation of the Directing Board be conveyed to all the state and local representatives whose full cooperation was essential to the ultimate achievement. The Directing Board, at its final meeting on May 17, 1946, resolved that the untiring efforts, kind tolerance, and successful accomplishment of these State Committee members and local advisers be commended to the appropriate professional State Society for suitable recognition by the Society.

I hope that you will draw this recommendation to the attention of your Society, and that they will be disposed to afford some such recognition.

Sincerely yours,

(Signed) FRANK H. LAHEY, M.D.
Chairman, Directing Board

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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

AMA HOUSE OF DELEGATES

Report of ALEX M. BURGESS, M.D., R. I. Delegate

THE 1946 meeting, held at San Francisco, July 1st to 5th, was well attended and successful. The work of the Local Committee on Arrangements, made up of members of the Medical Association of San Francisco is to be highly commended. Everything was done for the comfort and convenience of those attending the meetings despite the occurrence of the street-car strike which made the use of special buses necessary. The Scientific Session and the scientific and technical exhibits were of the greatest interest as far as your delegate was able to judge them at times when meetings of the House of Delegates and reference committees did not demand his presence.

The sessions of the House of Delegates were, as usual, characterized by intense activity with the usual large amount of work accomplished. Inasmuch as the details of the actions of the House are being published by the A. M. A. Journal this report will deal with a few highlights only that may be of particular interest to Rhode Island physicians.

As regards the resolution passed by the Rhode Island House of Delegates on May 8, 1946, dealing with the matter of certification of illness and recovery by attending physicians in carrying out compulsory cash sickness programs, it was introduced by your delegate, studied in detail by the Reference Committee on Legislation and Public Relations, reported favorably to the House and unanimously passed by that body. (See special report on page 609.)

A further interesting recommendation made by the same Reference Committee and also adopted by the House was to the effect that rather than attempting to make a national plan for voluntary prepayment insurance each state should develop its own plan independently and that a continued study of low income groups, particularly in farm areas, should be made. If subsidies should become necessary the plan of granting them at, or below, state levels was advised.

The Report of the Board of Trustees, which, as usual, gives evidence of intensive and detailed work throughout the year will repay study as it is published. One action on their part is, I believe, of especial interest in view of the widespread feeling on the part of a large group in the profession that

the Editor of the Journal should be required to confine his work to his duties as Editor and not attempt to represent the Association on matters of medical economics or public relations. The Board of Trustees, apparently realizing the situation, reported that they had employed a firm of consultants who had made a detailed study, including a survey of all actions of the House of Delegates for the past six years, and many contacts with legislators, labor and farm groups and others throughout the country. These consultants expressed the opinion that the work of the American Medical Association, as far as publicity is concerned, should be divided into three fields each under the supervision of an expert. These divisions are (1) scientific, (2) medical economics and (3) public relations. As regards scientific work they recommended that the publication of this work be, as at present, the responsibility of the Editor of the Journal. They stated their belief that the same individual cannot adequately carry on this work and at the same time deal with medical economics and public relations. They therefore advised that a person of high calibre be obtained to promote the work of the Bureau of Medical Economics. They suggested that in this department an opportunity be given for a full expression of diverse viewpoints and minority opinions. Such a director, it was reported, has already been tentatively selected. In the matter of public relations the consultants believed that the attitude of the profession has, in the past, been too defensive and negativistic. They advised the further development of the positive program which has now been adopted. This, they believe, should include definite enlargement and improvement of the magazine Hygiea. They recommended that an expert be selected to head this work in public relations and that he be made an executive assistant to the secretary, Dr. Lull. The Board of Trustees has adopted the recommendations of the consultants with slight modifications only and this action was approved by the House of Delegates. This disposes of the question as to the proper publicity methods of the Association, including the activities of the Editor, to the satisfaction, it is believed, of all concerned.

In the election of officers all were chosen unanimously except the speaker. In honoring Dr. Olin

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FACTS ABOUT THE PREPARATION OF



Campbell's STRAINED BABY SOUPS

**Q. How are meats prepared
for the soups?**

A. The full protein and other nutritive values in meat are available only when the meat solids as well as the juices of meat are used. Campbell's method of comminuting the meat—superior to the "scraping" common in home use—assures that all the edible solids as well as all the juices are included. Four of the Campbell's Strained Baby Soups have a meat base: Chicken, Liver, Lamb and Beef.

**Q. How are vegetables
prepared for the soups?**

A. Both the flavor and the nutritive values of vegetables naturally depend in great part upon the way they are handled and cooked. Campbell's have developed a method, based on the latest scientific knowledge, which retains the minerals and efficiently conserves the vitamins, as well as the wholesome natural flavors.

Campbell's Strained Baby Soups represent fine quality . . . in ingredients . . . in care and method of cooking . . . in retention of minerals and conservation of vitamins . . . and in good flavor. Every resource of Campbell's Kitchens is devoted to that aim.

**Q. How early may
these soups be started?**

A. That depends entirely upon the individual baby and the physician's judgment. However, these soups are intended for use as early as any strained baby food. The soups are not seasoned (except for light salting) and are of smooth texture and uniform consistency. A comprehensive analysis of each soup may be had upon request to Campbell Soup Company, Camden, New Jersey.

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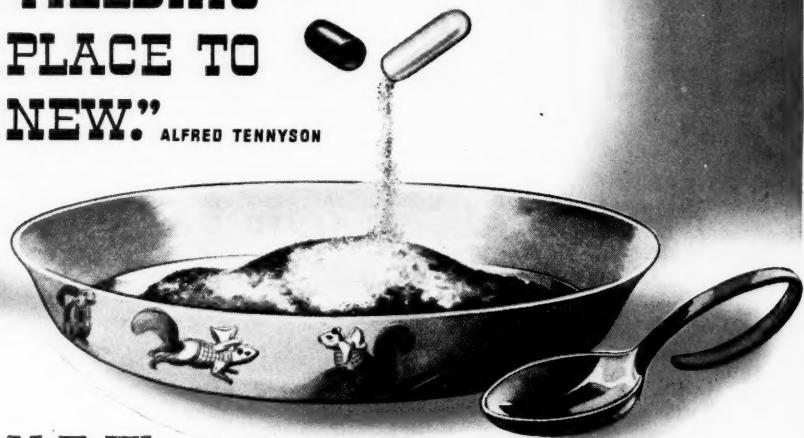
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REFERENCES: Rambar, A. C.; Hardy, L. M. and Fishbein, W. I.: Wolf, I. J.: J. Ped., 22:396-117 (April) 1943
J. Ped., 23:31-38 (July) 1943
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Wolf, I. J.: J. Ped., 22:707-718 (June) 1943
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THE BRADLEY HOME — A CHILDREN'S PSYCHIATRIC HOSPITAL

ON APRIL 8, 1946, when the Emma Pendleton Bradley Home completed its first fifteen years of service, it was still the only independent children's psychiatric hospital in the United States. This institution, located on the eastern shores of upper Narragansett Bay in the Riverside section of the Town of East Providence, is about five miles from the center of the City of Providence. Its origin dates back to an endowment provided in the wills of the late Mr. and Mrs. George L. Bradley of Providence, who many years ago decided to leave their entire estate to erect such an institution in the name of their only child. A Board of Trustees, made up of outstanding Rhode Island citizens, was selected in 1925 to administer this endowment and has directed the policies and financial support of the hospital during its construction and in the years that have followed its opening in 1931.

The functions of the Emma Pendleton Bradley Home are threefold. First of all it provides in-patient neuropsychiatric treatment for boys and girls up to twelve years of age. Preference is given to Rhode Island residents, but children are accepted from all parts of the country provided that they are within the age range, are of normal intelligence, and can presumably profit from what treatment is available. The Bradley Home also serves as a center for the training of professional personnel. Its third function is to sponsor scientific and clinical investigation and medical research.

Clinical Facilities

Residential psychiatric treatment for children is still in its early stages. Although the Bradley Home is the only independent hospital of its type, there are some half-dozen children's psychiatric wards in various parts of the country being operated as units of state and municipal mental hospitals. Several projects similar to the Bradley Home are being planned for the postwar period elsewhere. Considerable interest in the entire subject is commanding wide general attention, but the bulk of residential treatment is still being sponsored by social service organizations administering insti-

tutions and homes with psychiatric affiliations and consultation service instead of direct medical supervision.

Maladjusted children referred for hospital treatment are usually more seriously ill than those treated in private offices or community clinics. Their outstanding problems differ from those of the bulk of adult patients requiring psychiatric hospital care. Psychoses in childhood, although attracting considerable clinical comment just at present, are extremely rare. The debilitating and deteriorating diseases of old age are, of course, absent. Physical illness as a cause or result of emotional maladjustment in children is less conspicuous than in the adult group.

The Bradley Home meets the diagnostic and treatment needs of its patients by providing complete facilities for pediatric and psychiatric hospital care. Its greatest asset is a staff thoroughly oriented in children's work. In addition to medical and laboratory facilities and organization for group and individual psychotherapy, a full school and recreational program is provided for patients in the various age groups up to twelve years.

The hospital has a bed capacity of forty-eight, and up to January 1, 1946 nine hundred and ninety-nine children had been admitted. The primary diagnosis was behavior disorder in 55.8% of these, convulsive disorder in 14.3%, mental deficiency in 8.1%, and a variety of other diagnoses in lesser amounts. Special facilities for certain types of orthopedic care, notably in the field of cerebral palsy, were discontinued in 1942.

Professional Training

Opportunities for professional experience have been centered about a training program for physicians, which has now assumed residency status. The American Board of Pediatrics now gives credit up to six months toward certification for hospital experience at the Bradley Home. Arrangements are being completed for the teaching of undergraduate medical students in the near future. It is hoped that postgraduate training for nurses and psychol-

continued on next page

BRADLEY HOME*continued from preceding page*

ogists may be resumed in the future, the war having interrupted previous plans for this.

Clinical Research

Research along several lines has been carried out for the past twelve years at the Bradley Home. The most notable contributions have been in electroencephalography, observations on the effects of drugs on children's behavior, and studies of the rare psychotic disorders of children. The activity of this program is reflected in the fact that seventy-five scientific articles have been published from this small hospital.

Following interruption of training and research activities by the war, a gradual resumption of the full threefold purpose of the Bradley Home has been under development for the past several months. Residencies have been resumed, research activities are again being undertaken or inaugurated, and directly and indirectly all therapeutic facilities have been stimulated.

News Items

Donald B. Lindsley, Ph.D., who has directed the psychological and electroencephalographic laboratory at the Bradley Home since 1938, has been appointed Professor of Psychology at Northwestern University, Evanston, Illinois, and will leave for his new post at the end of the summer. Maurice W. Laufer, M.D., who served as resident physician at the Bradley Home in 1942, has been appointed Clinical Director, which includes responsibility for the electroencephalographic program. Dr. Laufer is an accredited pediatrician with additional extensive neuropsychiatric and electroencephalographic experience in the Army Medical Corps. He will assume his duties at the Bradley Home upon his separation from the armed forces.

Eric C. Denhoff, M.D., who served a residency at the Bradley Home in 1941 and returned in recent months as assistant physician, has been appointed Director of Clinical Laboratories.

Visiting fellowships, primarily for the benefit of returned veterans, in the fields of pediatrics and psychiatry, providing training similar to that of residencies but of shorter duration, have been planned for the postwar period, and appointments running into the spring of 1947 have already been made.

The 1945 Annual Report of the Bradley Home contains specific information as to the treatment facilities available and procedures in regard to arranging admission for any child. Copies have been sent to all members of the Rhode Island Medical Society and the American Academy of Pediatrics. Further copies are available upon request.

RHODE ISLAND MEDICAL JOURNAL**CONSERVATION OF PULMONARY FUNCTION
IN CHEST CASUALTIES***continued from page 592*

tain special cases where localization is difficult a pneumothorax or pneumoperitoneum may decide the location of the foreign body.

Foreign bodies in the anterior surface of the lung may be removed by incising the intercostal bundle. If necessary to obtain better exposure one or even two costal cartilages may be incised, thus allowing greater retraction of the ribs. Foreign bodies in the posterior aspect of the lung are removed by subperiosteal excision of a small portion of the rib overlying the foreign body and incising the underlying periosteal bed.

Once the exposure has been obtained, the foreign body may be located by palpation in the majority of instances. The fibrous tract left by the missile may be palpated down to the foreign body in some instances. Lacking definite identification of the foreign body, a needle may be inserted to elicit the characteristic resistance offered by the foreign body. Once located, the visceral pleura immediately overlying the foreign body is incised and by blunt dissection a tract is established with a forceps and the foreign body is grasped and removed. The defect left by the foreign body is carefully debrided and using an atraumatic needle, mattress sutures are placed closing the defect in the lung. Following this the lung is fully expanded and the effectiveness of the closure is tested by dropping saline solution over the suture line. The thoracic cavity is then closed.

Ordinarily no drainage is necessary if the defect created by removing the foreign body has been adequately closed by suturing. Occasionally small amounts of air or serous fluid collect postoperatively. These can be easily handled by aspiration.

Conclusions

Metallic foreign bodies should be removed only when there is an indication that their presence will cause complication in the future. The mere presence of a foreign body is not disqualifying for duty.

Hemothoraces should be aspirated early and frequently enough to keep the pleural cavity dry and the lung fully expanded. Large hemothoraces that do not respond to aspiration should receive early decortication. This will give almost complete restoration of function to the lung and it is believed lower the incidence of empyemas.

Empyemas that are localized, small and have an underlying lung that is capable of fully expanding or empyemas in the patients too sick to stand a decortication are treated by open drainage. Large empyemas, originating in a clotted hemothorax, with a lung that is incapable of expanding because of a fibrin capsule are treated by thoracotomy and decortication.

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* *Laryngoscope*, Feb. 1935, Vol. XLV, No. 2, 149-154
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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STREPTOMYCIN FOR CIVILIAN USE

Preliminary plans for limited commercial distribution of streptomycin after September 1st were outlined by Civilian Production Administration officials at a meeting of the Streptomycin Producers Industry Advisory Committee, CPA stated recently.

The plan, as outlined by CPA, will follow that used with penicillin. Streptomycin will be issued to selected hospitals throughout the country, and they will act as depots for their area. The amounts of streptomycin that will be distributed, and the particular hospitals have not been determined as yet.

Although CPA reported that the June production of streptomycin, as indicated from preliminary reports, was lower than expected, it is felt that a sufficient quantity will be on hand for the inauguration of the proposed plan on September 1, 1946. May production of streptomycin was 38,750.9 grams.

Until the final arrangements, supported by production reports, have been made for the new program, civilian appeals for this drug will continue to be met only from the limited supply available under the research program of the National Research Council. These appeals are judged on the basis of clinical information submitted by the physician in charge of the individual case to Dr. Chester S. Keefer, Evans Memorial Hospital, Boston, Mass.

Committee members said that the sponsoring companies will continue the financial support of the Research Council's clinical research on streptomycin until September. The additional cost will increase to nearly \$1,000,000 the grants-in-aid to the Council by the streptomycin producers.

Dr. Keefer said that at present there is not sufficient streptomycin available to provide for the treatment of tuberculosis. Dr. Keefer said that experimental work carried on so far on tuberculosis gives increasing promise that the drug will find a definite place in the treatment of this disease. He emphasized however, that streptomycin will supplement, not replace, the present accepted methods of treatment.

Due to the limited production of streptomycin, he said, and the great quantities needed for treating this disease, its use must be restricted to research cases started before the setting up of the present program.

Dr. Keefer pointed out that treatment of individual cases of tuberculosis for the minimum period of three months cost about \$4,000 for the drug alone.

AUGUST Library Hours

During the month of August the Medical Library will close daily at 1 P.M., except Saturday when the closing hour will be noon.

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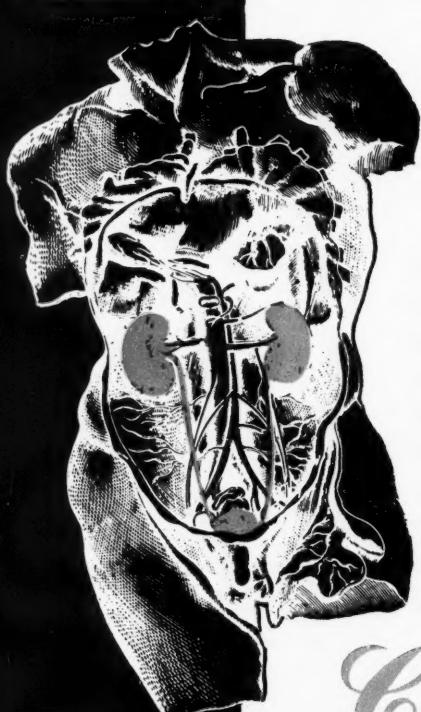


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AMA ADOPTS RHODE ISLAND PROPOSALS

RELATIVE TO COMPULSORY DISABILITY COMPENSATION

AT THE annual meeting of the American Medical Association at San Francisco, July 1—5, the House of Delegates unanimously accepted recommendations made to it by the Rhode Island Medical Society relative to compulsory disability compensation programs. The resolution adopted at Providence at the meeting of our House of Delegates read:

"Resolved that the House of Delegates of the American Medical Association review and amend the action taken at its meeting in September, 1938, at Chicago, on the subject of insurance against the loss of wages, and be it further

"Resolved that the American Medical Association through the proper Council or Bureau make a complete study of the existing and proposed compulsory temporary disability compensation programs, and that it report the findings of such a study, particularly as regards medical phases of the programs, to each of the constituent state medical societies before January, 1947."

The resolution was presented to the American Medical Association by Dr. Alex M. Burgess, delegate from Rhode Island. Subsequently Dr. Burgess and John E. Farrell, executive secretary of the Society, appeared before the reference committee of the AMA House of Delegates on legislation and public relations. This committee, headed by Dr. James Hamilton of Illinois, consisted of Dr. Hugh P. Smith of South Carolina, Dr. Deering G. Smith of New Hampshire, Dr. C. B. Conklin of the District of Columbia, and Dr. Elmer Hess of Pennsylvania.

The action of the House of Delegates in 1938 when it reviewed the proposed national health program and endorsed the principle of cash compensation for loss of wages due to non-occupational sickness or accident was subject to discussion before the Committee. It was pointed out by the Rhode Island representatives that in 1938 the House of Delegates expressed its opinion that in a cash disability compensation program the attending physician should be relieved of the duty of certification of illness and recovery, which function it believed should be performed by a qualified medical employee of the disbursing agency. The

impossibility of this arrangement without making every physician a state employee was cited as reason for the need for reconsideration of the action in the light of the experience in Rhode Island of the cash sickness compensation plan.

Mr. Farrell reviewed the three types of state disability compensation in existence or proposed, citing the medical phases of the Rhode Island plan, the cash sickness and disability insurance act passed by California last February, and the non-occupational accident and sickness benefits law proposed to the legislature in New Jersey in April.

On July 2 the reference committee made its report to the House of Delegates, stating that it had carefully considered the Rhode Island proposal and was unanimously in agreement in recommending that the House rescind its previous opinion relative to the certification of illness and recovery under compulsory sickness compensation plans, and also in recommending that a study be made of the medical phases of existing and proposed plans of this type of compensation for the benefit of each state medical society.

The House of Delegates unanimously adopted the report of the reference committee on this subject. In all probability the study will be undertaken jointly by the Council on Medical Service and Public Relations, the Council on Industrial Health, and the Bureau of Medical Economics.

SICKNESS ACT COMMITTEES NAMED

Recently Governor John O. Pastore, in accordance with provisions of amendments to the Cash Sickness Compensation Law made by the General Assembly at its recent session, named Dr. John F. Kenney and Dr. Albert H. Jackvony to serve on special study committees. Dr. Kenney, immediate past president of the R. I. Medical Society, will be the physician member of a three member Board of Review of cases appealed, and Dr. Jackvony, former President of the Providence Medical Association, will represent the medical profession on the 7-member Advisory Committee that is to review the sickness compensation program monthly.

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WOONSOCKET MEDICAL SOCIETY

A meeting of the Woonsocket Medical Society was held at the St. James Hotel on Tuesday, June 18. The meeting was called to order by President H. Lorenzo Emidy at 9:30 p. m.

The president appointed a nominating committee of Dr. Victor H. Monti, Dr. George Crepeau, Dr. Joseph McKenna, Dr. Virgilio Bertone, Dr. Thomas Lalor to present a slate of officers to serve the Society for the next twelve-month period.

The secretary presented applications for membership in the Society from Dr. George Vian and Dr. Harry Jacobs. Motions were made, seconded and unanimously adopted electing both physicians members of the Society.

Dr. Emidy presented Mr. John E. Farrell, executive secretary of the Rhode Island Medical Society who reported on the status of the Society's Voluntary Prepaid Surgical Insurance Program, and also discussed the amendments made to the Rhode Island Cash Sickness Compensation Act and the actions taken by the Society relative to the proposed new Health Code. Mr. Farrell answered many questions submitted by members of the Society on the various topics presented.

The motion was made by Dr. Crepeau, seconded by Dr. McKenna and unanimously passed that the dues for each active member for the ensuing fiscal year should be raised to make the total assessment \$5.00 per member.

Dr. Monti reported for the nominating committee the following slate of officers for the ensuing year: Dr. Joseph Reilly, president; Dr. Richard Dowling, vice-president; Dr. Alfred King, secretary; Dr. Paul Boucher, treasurer; Drs. James McCarthy, councillor, and Saul Witten, alternate councillor; Drs. H. Lorenzo Emidy and Francis King, delegates; Drs. E. L. Tremblay, George Crepeau and Joseph McKenna as censors.

After thanking the members for their support of his administration during the past year, Dr. Emidy appointed Dr. Lalor as a committee of one to escort the new president to the chair. Dr. Reilly thanked the members and expressed the hope that the Society may meet more regularly during the coming months.

Attendance — 20.
Collation was served.

Respectfully submitted,

PAUL E. BOUCHER, M.D., Secretary

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Feinberg, S. M.: Allergy in Practice,
Chicago, The Year Book Publishers, Inc., 1944, p. 502.

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77th ANNUAL MEETING — CANADIAN MEDICAL ASSOCIATION

ALEX M. BURGESS, M.D.

THIS is a report on the 77th annual meeting of the Canadian Medical Association, which was held at Banff, Alberta, from June 10th to June 14th, 1946. It was my privilege to represent the American Medical Association at this meeting and to attend most of the sessions of the General Council, which corresponds to the House of Delegates of the American Medical Association.

It seems to me that the action and the attitude of the Canadian Medical Association on various topics is of considerable value to the American Medical Association and I therefore made a brief written report to Secretary Lull of the American Medical Association, enclosing the Confidential Committee reports of which I was given a copy. In the main the reports were adopted about as they appear in that document and, in general, it may be said that the attitude of the profession in Canada is similar to that in our own country.

I had the opportunity to talk to several of the officers of the Association at some length and, in general, their attitude on the subject of State Medicine and Compulsory Sickness Insurance is similar to that of the American Medical Association. Dr. MacPhedran, Chairman of the General Council, said that he felt it would be an excellent thing if the Canadian Medical Association and the American Medical Association could get together so that their common point of view on these topics could be compared, and if it could be brought out that the profession of these two countries held the same attitudes it might be of mutual help in this situation.

The report of the Committee on Medical Economics is of particular importance. It is evident that profound changes in medical practice are occurring in Canada and that the medical profession is doing a good job in guiding and controlling, although it cannot, and evidently does not wish to check the revolution which is going on and which it regards as inevitable and necessary. The principles which it has laid down in the published reports are, I believe, worthy of study and creditable to the medical profession.

In British Columbia ten years ago an unsound act legalizing State Medicine was passed and could not be implemented because of the opposition of the profession. Two years ago, in Saskatchewan, a Socialist Government was elected on a platform of State Medicine but public opinion has become better informed and has turned against the program. It now demands State-Aided Health Insurance. Federal aid is extended to all the provinces and the medical profession is holding out for and in a fair degree obtaining a control of the situation. In Saskatchewan fourteen health centers are being established with Federal Aid, each to furnish diagnostic and therapeutic service. It is to be remembered that Saskatchewan is the middle one of the prairie provinces and that it is quite similar both in its geography and in its population to the Dakotas. Already one hundred salaried municipal doctors are, I understand, starting work on contracts in the various cities and towns in Saskatchewan. The Government will give funds to any municipality which will offer to physicians contracts of a standard approved by the Medical Commission. It may be said that the Medical Commission has been treated pretty well by the authorities and that it is gaining most of its objectives in most of the provinces. I feel that these developments should be studied in our country. I was particularly impressed by what was said by Dr. A. D. Archer of Lamont, Alberta, who is Consultant on Medical Economics for the Canadian Medical Association, and who knows more about these developments than anyone else.

The scientific program, as far as I was able to attend it, was a fairly good one. There was no scientific exhibit and the commercial exhibit was somewhat limited.

The convention in the beautiful Canadian Rockies was an extremely pleasant meeting. The accommodations, however, were insufficient for the number of physicians who wanted to attend and at least a thousand were turned away.

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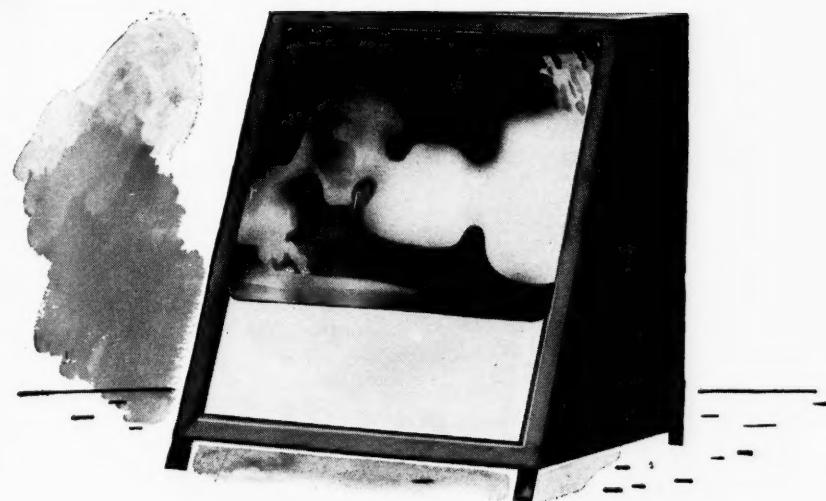
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N. E. INDUSTRIAL NURSES MEET

The industrial nurses of New England held an Annual Spring Conference June 29th and 30th at the Mount Washington Hotel, Bretton Woods, N. H. Ruth Estee, R.N., represented J. & P. Coats (R.I.) Inc. at that meeting. Dr. S. Sprague, was also present in a triple capacity, as Medical Director of J. & P. Coats (R.I.) Inc., as Vice-President of the New England Conference of Industrial Physicians and Surgeons, and also as Chairman of the Industrial Health Committee of the Rhode Island State Medical Society.

Approximately two hundred nurses were present at this Conference, which was carried on in a business like and prompt manner.

The speaker of the afternoon session on Saturday, June 29th, pointed out to the assembled nurses the varying conditions for which they should watch as the results of many new dyes, plastic, gasses, and solvents which are now being used in varying plants throughout the New England area. He pointed out the symptoms which they should watch for and to be sure that they themselves were as familiar as possible with the chemistry of these various things insofar as it might affect the health of the workers. The subject was a bit on the long side and in many ways was very interesting but in other ways it was a little too highly technical for a gathering other than scientists.

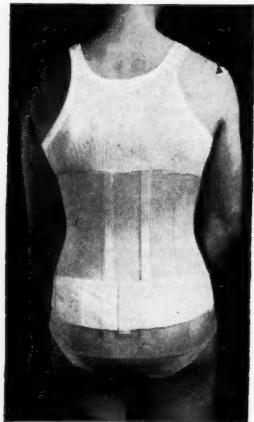
The dinner in the evening was attended by over three hundred people. The Governor of the State of New Hampshire extended brief greetings. The Honorable Sherman Adams, Congressman of the United States from New Hampshire, spoke on the relation of "The Nurse, the Doctor, and the Government". His talk was very excellent and he gave the impression to the writer that he is much more in favor of medical health work to be done through the medical associations rather than to have socialistic medicine as put forth in the so-called Murray-Dingell Bill. He aroused large applause by his words and he was very well received.

Dr. Arnold Hansen, Ph.D., Director of Labor Relations of Brown Company, Berlin, N. H., spoke on "The Nurse in Industrial Relations". The gist of his talk was to point out the value of the nurse in industry, and he spoke to the point on the many qualities of sympathy, efficiency, courtesy, neatness, etc., which every industrial nurse should endeavor to attain in order to retain kindly relations between the employee and management.

Words of greeting were also extended by Catherine R. Dempsey, R. N., who is the President of the American Association of Industrial Nurses, Georgianna Bergen, R. N., President of the New England Industrial Nurses Association, and Queenie LaBrecque, R.N., who is President of the New Hampshire Industrial Nurses Association.

continued on page 618

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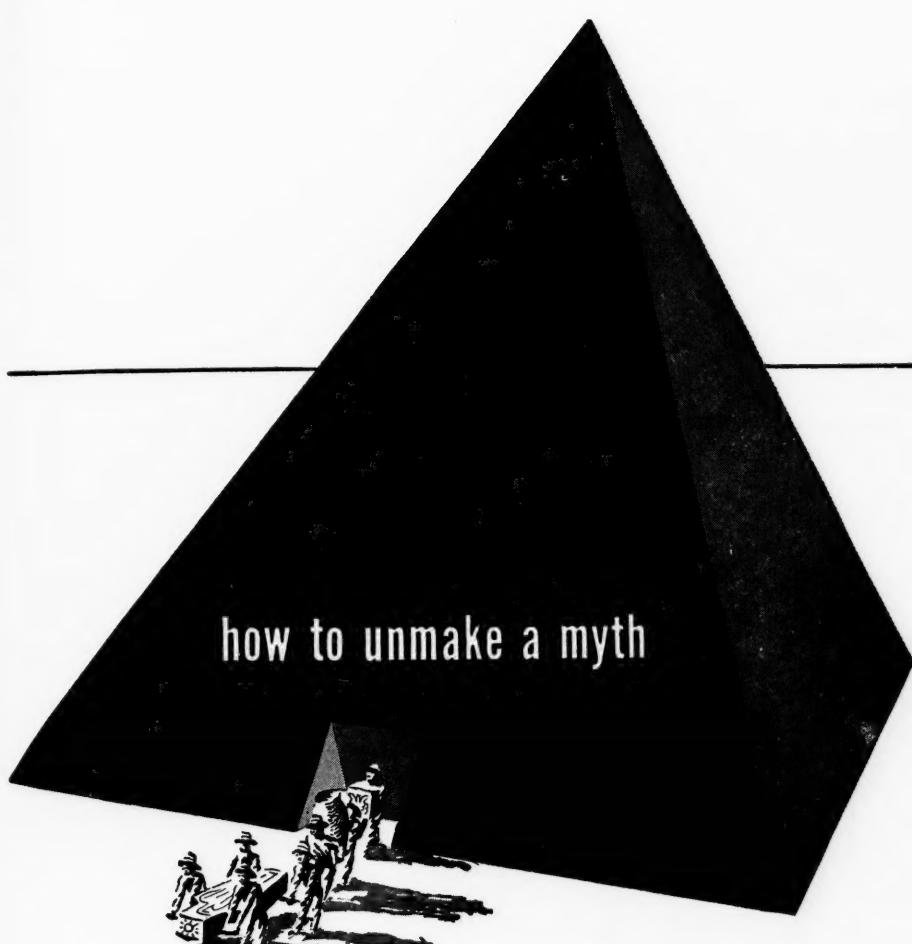
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¹. Am. J. Dis. Child. 66:1 (July) 1943



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U P J O H N V I T A M I N S

INDUSTRIAL NURSES MEET

continued from page 616

Dr. Sprague was introduced as the Vice-President of the New England Conference, but, due to the lateness of the hour, acknowledgment of the introduction only was given.

Sunday morning a breakfast meeting at 9:00 o'clock was held and the speaker was Mr. Kenneth Gould, meteorologist from the Weather Observatory on Mount Washington, who spoke about "The World's Worst Weather and How It Is Recorded". His talk lasted about an hour and was full of actual data and a considerable amount of humor in the varying situations which sometimes arise in his work.

Following this meeting, the Conference was adjourned and notification given that the Fall Conference was to be held at the Hotel Kimball in Springfield in the last week in October of this year.

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AMA HOUSE OF DELEGATES

continued from page 598

West by making him President-elect the House has fittingly recognized his long years of service to American medicine and the wisdom and experience which he has gained. The unanimous choice of Dr. Edward Bortz of Philadelphia as vice-president is, in the opinion of your delegate, a most happy one. The contest for speaker lay between two very experienced and able men, Dr. R. W. Fouts of Nebraska, who has served for many years as vice-speaker and was made speaker a year ago, and Dr. Lowell S. Goin of California, who has shown great ability as speaker of the California House of Delegates and whose able testimony before the Senate Committee considering S-1606 (the Wagner-Murray-Dingell Bill) has won the praise of the profession generally. Dr. Goin received slightly more than two-thirds as many votes as did Dr. Fouts.

The invitation to hold the 1949 session in New York City was presented by the delegation from the State of New York and was accepted. It has been already announced that the 1947 meeting will be held at Atlantic City and that in 1948 at St. Louis.



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* Pres.
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THE MEDICAL AUDIT*

HENRY S. JOYCE, M.D.

The Author. Henry S. Joyce, M.D., of Providence.
Assistant Superintendent, Rhode Island Hospital.

AUDIT is the examining of records of account and its purpose is to determine the course of the enterprise under scrutiny. Its history goes back for four hundred years or more, when the process had its first beginnings. All business firms whether manufacturing, merchandising or banking must have this done to find out where they have been, where they are, and where they are going. Corporations that provide service such as hospitals must have their financial affairs audited if management is to operate intelligently. The service to patients in hospitals is subject to the same type of evaluation after scrutiny and this must be done by those who are expert in the field. The records which must be examined are the histories of patients treated within the walls of the institution. It is the responsibility of the record librarian to preserve these and make them available for study; it is the responsibility of the medical staff to evaluate the service to patients by the evidence in these histories.

Of course, it is a basic truth that the audit can be only as good as the records are complete. It has been repeatedly pointed out that there are many good reasons why time and effort should be spent in writing the clinical records of patients. It is not my purpose to enumerate them at this time. However, it is my firm conviction that good records are essential for the best care of the patient.

The first item in the record, the admission history and physical examination should be expertly done and clearly described. This gives a resume of the health history of the patient from birth up to the present illness and all details of the condition for which he seeks treatment. Only when all these are recorded can a clear picture of the clinical condition at the beginning of treatment be drawn. These may be evidence sufficient to make a diagnosis at once, possibly with a chief disease and other secondary ones, which may be serious or trivial. For example, a carbuncle, which being on the exterior of the body, may be diagnosed with

some certainty. The history may reveal that the patient also has diabetes, perhaps it does not but a simple examination of the urine will soon determine if that disease presents a complication. Even a carbuncle may present a diagnostic problem in itself. Cutaneous anthrax looks much like a carbuncle, it has a more brawney induration which is wider in extent, it has a necrotic center which is harder, darker in color, and dry—usually there is a widespread edema about it, the patient is usually sicker. I have seen such a patient walk to the hospital and ask "to have this boil fixed." Yet he died within thirty-six hours of generalized anthrax. The occupational history in such a case is important in the differential diagnosis since this infection of the skin is usually found in those who handle animal hair or hides. The man just mentioned carried bundles of hides on his shoulder at his work.

Moreover, a single examination of the urine which shows the presence of some reducing substance does not prove the presence of diabetes. A substance other than glucose may give a positive reaction or there may be glucose present, but due to a low renal threshold or renal diabetes and not diabetes mellitus. This can be determined by the blood glucose level at the time the urine was excreted; if within normal limits renal diabetes is present, if abnormally high, it is due to true diabetes.

The past history of the patient, also the family history may provide a clue as to the presence of diabetes. The fact that the parents or siblings of the patient have had the disease should at least raise the suspicion that he also might have it. There are typical symptoms which point rather definitely to this metabolic disorder—some that are common to others such as hyperthyroidism or a tuberculous infection. When these items are carefully sought for and recorded the diagnosis or diagnoses and the differential diagnoses begin to take form.

The physical examination should be as complete and detailed as possible. Missed diagnoses are rare but are due more to not looking for signs than to misinterpreting signs that are found. I well remember a middle-aged woman sent to the hospital with a diagnosis of "acute abdomen" and although examination of her abdomen was absolutely negative, she gave a history of symptoms suggesting high

continued on next page

*Presented at the Annual Meeting of the Rhode Island Association of Medical Record Librarians, at Providence, May 15, 1946.

intestinal obstruction. Her temperature was normal, so was her pulse rate and one was tempted to call it gastro-intestinal disturbance in a neurotic person. But—her pupils gave the Argyll-Robertson reaction and her knee jerks were absent pointing definitely to the presence of Tabes Dorsalis and the suspicion that the pains were caused by tabetic crisis. Later laboratory tests and the course of the disease confirmed this diagnosis.

A description of the nutritional and mental state of the patient is always helpful. The first can be roughly approximated by the weight and height when they are recorded but the color of the face and mucous membranes and texture of the skin are valuable indeces in many diseases. That reminds me of a diagnosis made by the color of the face. The patient's chief complaints were cough, loss of weight and some, but not marked, shortness of breath on exertion. This pointed to disease in the chest but no definitely abnormal signs could be found either in the heart or lungs; certainly not enough to account for his symptoms. In addition and as an after thought, he spoke of some distress after meals which had been present for a month or so. The chest examination had been made with the patient in the sitting position but the abdominal was done in the supine. So soon as he laid down his face became blue and got bluer and swollen. Simple change of position had produced marked congestion of his head and neck—this pointed to a mediastinal tumor which fell back and pressed on the veins in the upper thorax. X-ray examination showed a solid tumor in the middle of the thorax without lateral extension which explains why there were so few signs on physical examination.

Another patient comes to mind in which the diagnosis was based on the color of the mucous membranes but also illustrates how the history and physical examination aids in your diagnosis. The patient was a small girl aged five or six years. Her appearance was most striking; her lips and finger tips were deep blue, not just ordinary cyanosis, but a blue with no perceptible red in it. First impression—congenital heart disease—but no—before examining her chest you note that she is perfectly comfortable and composed—no hurried breathing at all, no visible pulsations in the neck. How long has she been of this color? the mother answers "only this morning". To the child, "How do you feel?" Answer "all right". Examination of the heart and lungs shows no abnormal signs at all. It is Sunday and the child is daintily dressed but you note that she wears dark shoes. This brings to mind that shoe dye solvents are absorbed through the skin and produce methemoglobinemia. Then it is ascertained that the little girl's shoes were dyed that morning and put on to wear before the dye had dried. That was the cause of her symp-

toms—absorption of the dye solvent which would not have occurred if time had been allowed for it to evaporate before wearing her shoes.

The rest of the physical examination must be done with full use of eyes, ears and sense of touch. The record should show positive evidence that this has been carried out. Then decision must be made as to what examinations in the X-ray Department or Laboratory are needed to supply the information needed for a positive diagnosis. Some tests need be done on all patients, others as indicated by the possible diagnosis. The record should show that these have been wisely chosen and promptly done.

An emergency blood glucose determination has given the diagnosis in many situations which come up suddenly. One patient comes to mind who had a period of mental confusion such that a history was not obtainable. Fortunately a vial of insulin was found in his pocket which suggested that he might have diabetes. His blood glucose was very low, his confusion cleared after he received some intravenously. Then we found that he was a diabetic using protamine insulin. When his blood sugar returned to normal he was normal.

Aside from examinations which are needed to determine the chief pathological lesion others need be done to determine secondary effects which are of importance. An instance which comes to mind is that of onset of hemorrhoids in a middle-aged person, who never had trouble of that sort before. Proctoscopic and x-ray examinations are indicated on the suspicion that the first lesion is a secondary effect of a cancer of the sigmoid or rectum. Many times this has proved to be true. Then to find out how much damage such a process has done to the body one must do thorough studies of the blood, both cellular contents and chemical determinations.

All forms of treatment should be shown in sufficient detail so that an exact picture is drawn and the immediate and remote effects are described. All complications and progression or regression of the original lesions should be described as objectively as possible.

Our new therapeutic agents give us wonderful control over many infections that formerly ran their course but little influenced by drugs with specific action. Many patients were saved by general measures deigned to foster the effects of the natural defenses of the body. But now we have agents that attack the organisms causing disease—although there are many infections not influenced by them at all. We also have new drugs which favorably influence metabolic disease—thiouracil is an example. There are many others on which much research has been done as to their actions and therapeutic effects. These require exact observation and recording. The deleterious effect of many

continued on page 625



For thousands of children laboring under the social and educational handicaps imposed by petit mal, Tridione, a product of Abbott research, offers new hope. In one series of cases, for example, Tridione was administered to a group of 50 patients suffering from petit mal, myoclonic or akinetic seizures which had not responded to other medication. In a period of days to weeks, the seizures ceased in 28 percent of the cases, were reduced to less than one-fourth of the usual number in 52 percent, and were little affected in 20 percent. In several instances, the seizures once stopped did not return when medication was discontinued. Tridione has also been shown to have a beneficial effect in the control of a certain proportion of psychomotor cases. Tridione is supplied in 0.3-Gm. capsules, bottles of 100. Literature on request. ABBOTT LABORATORIES, North Chicago, Ill.

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Richards, R. K., and Perlstein, M. A. (1945), *Tridione, A New Experimental Drug for the Treatment of Convulsive and Related Disorders*, Proc. Chicago Neurological Soc., Jan. 9; and (1946), *Arch. Neurol. and Psychiatry*, 55:164, February.

Lennox, W. G. (1945), *Petit Mal Epilepsies: Their Treatment with Tridione*, *J. Amer. Med. Assn.*, 129:1069, December 15.

DeJong, R. N. (1946), *Effect of Tridione in the Control of Psychomotor Attacks*, *J. Amer. Med. Assn.*, 130:565, March 2.

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THE MEDICAL AUDIT

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of them is on the blood forming organs which shows whether one should look when using the drugs in full doses. One can then shift to another drug without this toxic effect or, strange as it may seem, one may continue to use the same drug and the disturbance in blood formation will clear up. In some cases this proves to be true but it would probably be safer to switch to another one.

Records that are complete and accurate are essential for an audit. The procedure varies in hospitals but the purpose and results are the same. One small hospital has a weekly review of all records by the auditor with the Chairman of the Staff and the Record Committee. Each Staff member is Auditor for one month in rotation which certainly is an equitable way of doing the work. It achieves two purposes—each one shares in the responsibility and in the opportunities. It also improves the Auditor's concept of a good and complete record. All cases are classified as to type, risk and result obtained. Errors in diagnosis, treatment, judgment and technique are looked for.

When errors or omissions are found a confidential note is sent to the physician responsible with suggestions from the group. The Record Librarian is given this information and she must see that the doctor makes the suggested change before the record is indexed and filed. A monthly summary report is made to the Staff. All deaths of patients are classified as inevitable, justifiable or non-justifiable.

Another method which applies particularly to the Surgical Services is the review of the month's work at a closed meeting of the Staff wherein all deaths are discussed. The surgical pathology is made note of particularly. Complications such as wound disruption, sepsis, infarctions, emboli, hemorrhage, etc. are also discussed. Reports of results in specific diseases are assigned to members of the Staff for purpose of comparison with previous years. The results found in follow-up clinics are also the basis of some reports. The Chief of the Service is the responsible person in such an organization. He makes an annual report to the Superintendent and Trustees; he also must decide when a member of the Staff has poor results, whether he should be trained to do better work or be dropped from the Staff.

In the larger hospitals the volume of work that needs be reviewed precludes the use of all records and opinion has been expressed that those of patients who died constitute a fair example. If the care of these patients has been good, it is inferred that in general the patient care is good.

The American College of Surgeons has formulated a method of audit and states the way the in-

formation so obtained should be used. The organization includes an active Record Committee, a professional accountant and a Qualification Committee. The first named, the Record Committee, must see that the members of the Staff make complete records on all cases, and make a statement at the time of admission of their estimates of the risks in terms of Good, Fair and Bad under the three categories of Elective, Emergency and Palliative. When the record is complete, the professional accountant reviews it critically and states his opinion of the management and result. Those approved by him are indexed; those that are debatable are referred to the Qualifications Committee for further evaluation and this Committee may refer to the full Staff, if they so desire. When this process has been completed the Record Librarian may then make up the Physician's Index which records the performance in summary of each member of the Staff. On the basis of this index, granting of privileges, promotions and appointments may be made, with adequate judgment.

The medical audit then is a method of self appraisal by members of the Staff of a Hospital; the basis of which is complete and detailed clinical records; the purpose of which is improvement in the care of the patients by full use of knowledge gained by experience.

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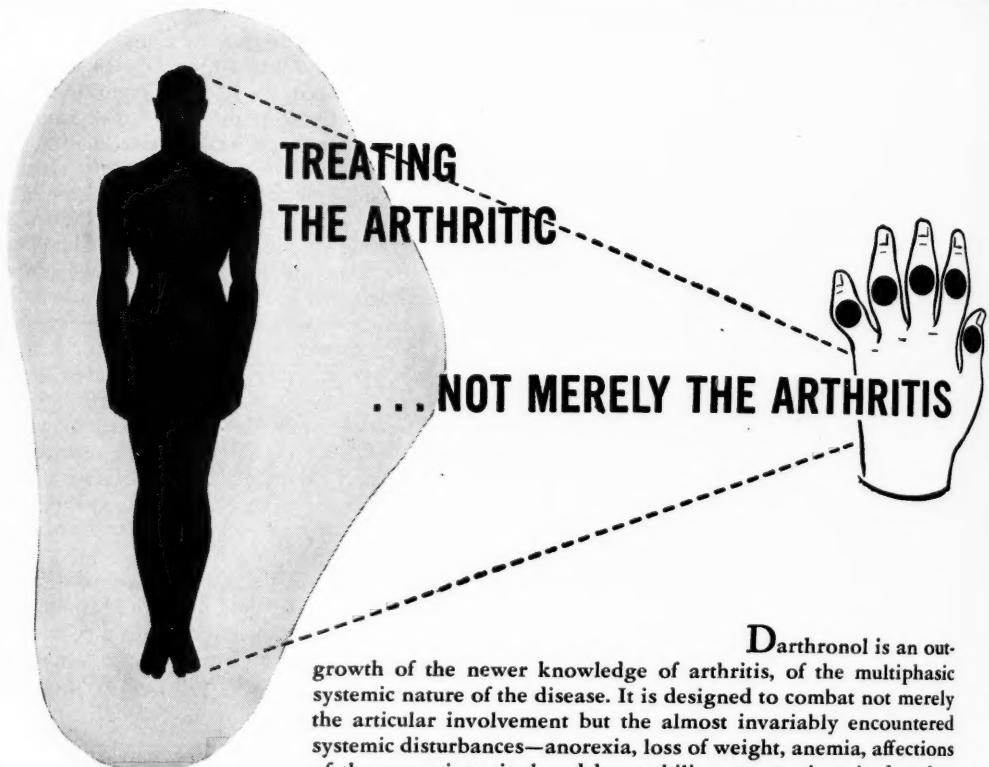
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ALKALOL may be used full-strength or diluted not more than one half. Use as drops or in an eye cup.

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The second edition of the brochure "Systemic Therapy in the Arthritis" is now available. Physicians are invited to send for a copy.

Darthonol is an outgrowth of the newer knowledge of arthritis, of the multiphasic systemic nature of the disease. It is designed to combat not merely the articular involvement but the almost invariably encountered systemic disturbances—anorexia, loss of weight, anemia, affections of the gastrointestinal and hepatobiliary tracts, impaired carbohydrate metabolism, etc. For this purpose Darthonol combines, in a single capsule, massive dosage of vitamin D₂ and adequate potencies of the other eight vitamins concerned with the functional capacity of numerous organs and the integrity of vital processes affected in arthritis. An added advantage is that the amounts of each vitamin in the capsule are automatically increased in a constant ratio, when severity of the disease demands more intensive therapy with vitamin D₂.

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Calcium Pantothenate.....	1 mg.
Niacinamide.....	15 mg.
Mixed Natural Tocopherols.....	3.4 mg.

(Equivalent in biological activity to 3 mg. of Alpha Tocopherol)



DARTHONOL for the Arthritis
a ROERIG Preparation

THE PEPPER BILL

With the all-out effort by the Administration to enact the Wagner health measure it was generally assumed that there would be no action on S.1318, Senator Pepper's maternal and child welfare act. However, when it became evident that the Wagner proposal was doomed for this year, Senator Pepper revived his bill. Hearings were held June 21 and 22 and little opposition was expressed by the witnesses, except that by Drs. Joseph Wall and Joseph Howard, the latter of Bridgeport.

Among other things S.1318 would provide "free" medical services for some 43 million children and 3 million mothers during the maternity period, and thus would nationalize medicine for approximately 40% of the population. If enacted the bill would establish the principle that the Federal government is to furnish medical care as a tax-supported public service for all persons in certain segments of the population whether or not they are able to pay for such services themselves.

Consideration on the bill was laid over until July 15, and on that date the Senate Committee on Education and Labor instructed Senators Pepper and Taft to introduce a joint resolution amending title V of the Social Security Act to provide for increased grants to states for maternal and child health care, for crippled children, and for child welfare services. This resolution, serving as a temporary substitute for the Pepper act, will provide for sizable increases in the appropriations for the already existing programs.

FEDERAL SECURITY AGENCY RE-ORGANIZED

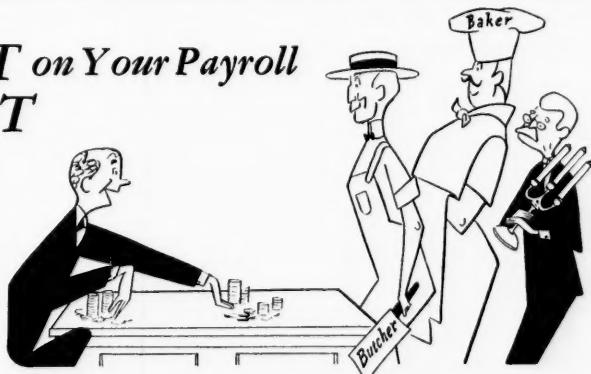
With the enactment by Congress on July 16 of the Re-organization Plan No. 2, with the Senate vote a close 40-37 one in favor of the program, the U. S. Employees Compensation Commission, the Children's Bureau (which administered the EMIC program), and the Division of Vital Statistics are transferred to the Federal Security Agency headed by Watson B. Miller.

The Agency is now to be constituted, according to Miller, under four main operating branches and six offices. The branches are Social Security Administration, headed by Arthur J. Altmeyer who has been chairman of the Social Security Board now abolished, with Miss Katherine Lenroot continuing as chief of the Children's Bureau; Education, to continue under the direction of John W. Studebaker, Commissioner of Education since 1934; Public Health, of which Surgeon General Thomas Parran will continue as head; and Office of Special Services, a new office to be directed by Mrs. Jewell W. Swofford, chairman of the U. S. Employees' Compensation Commission since 1933.

George E. Bigge, former Providence resident, and member of the Social Security Board since 1937, will head the new office of Federal-State Relations, and Mrs. Ellen Woodward, another member of the SSB, is to head the Office of Inter-Agency and International Relations.

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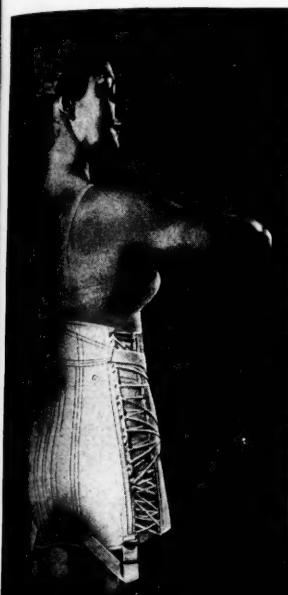
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The attention of members of the Society is called to the action taken by the House of Delegates of the Rhode Island Medical Society on September 28, 1944, that

"In the opinion of the Rhode Island Medical Society 19% cream fulfills all the necessities for cream in medical practice, and therefore all requests for cream of butterfat content in excess of this amount should be denied."

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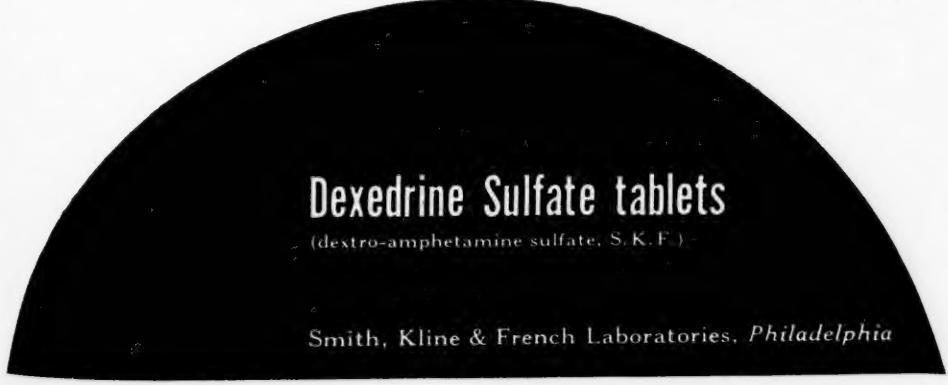


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The steady decline of the disease is strikingly brought out by the statisticians by contrasting 1945's 346 cases with the 48,920 cases reported in the United States as recently as 1930.

The smallpox-free States last year, all located on the Atlantic seaboard were Connecticut, Delaware, Florida, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and the District of Columbia. Top honors went to Rhode Island, which has not had a case since 1928. The poorest records were made by Indiana, with 50 cases; Arkansas, 31; and Mississippi, 25.

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Newport County Medical Society	James C. Callahan Samuel Adelson	Norman M. MacLeod	President, A. M. Tartaglino Vice Pres., Wm. A. Stoops 2nd Vice Pres., P. P. Ciaria Secretary, H. W. Brownell Treasurer, N. U. Zielinski Censors: N. M. MacLeod John A. Young	4th Tuesday of every other month—Jan., Mar., May, July, Sept., Nov.—usually no July meeting held	January
Pawtucket Medical Association	Earl J. Mara Robert Henry Charles L. Farrell Henry Hanley	James L. Wheaton Earl F. Kelly (alternate)	President, Wm. N. Kalcounos Vice Pres., Earl J. Mara Treasurer, L. A. Senseman Secretary, K. W. Hennessy	On or after 3rd Thurs. of March each month at time and place designated by the Pres. (except July-August)	March
Washington County Medical Society	Linwood H. Johnson Julian R. Tatum	John P. Jones	President, S. P. Turco 2nd Vice Pres., S. A. Capalbo Sec'y-Treas., J. R. Tatum	January, April, July October — on second Wednesday of the month	January
Woonsocket Medical Society	H. Lorenzo Emidy Francis King	James McCarthy Saul Wittes (alternate)	President, Joseph Reilly Vice Pres., Richard Dowling Secretary, Alfred King Treasurer, Paul Boucher Censors: E. L. Tremblay George Crepeau Joseph McKenna	2nd Tuesday, alternate months, Sept.-June	Elective
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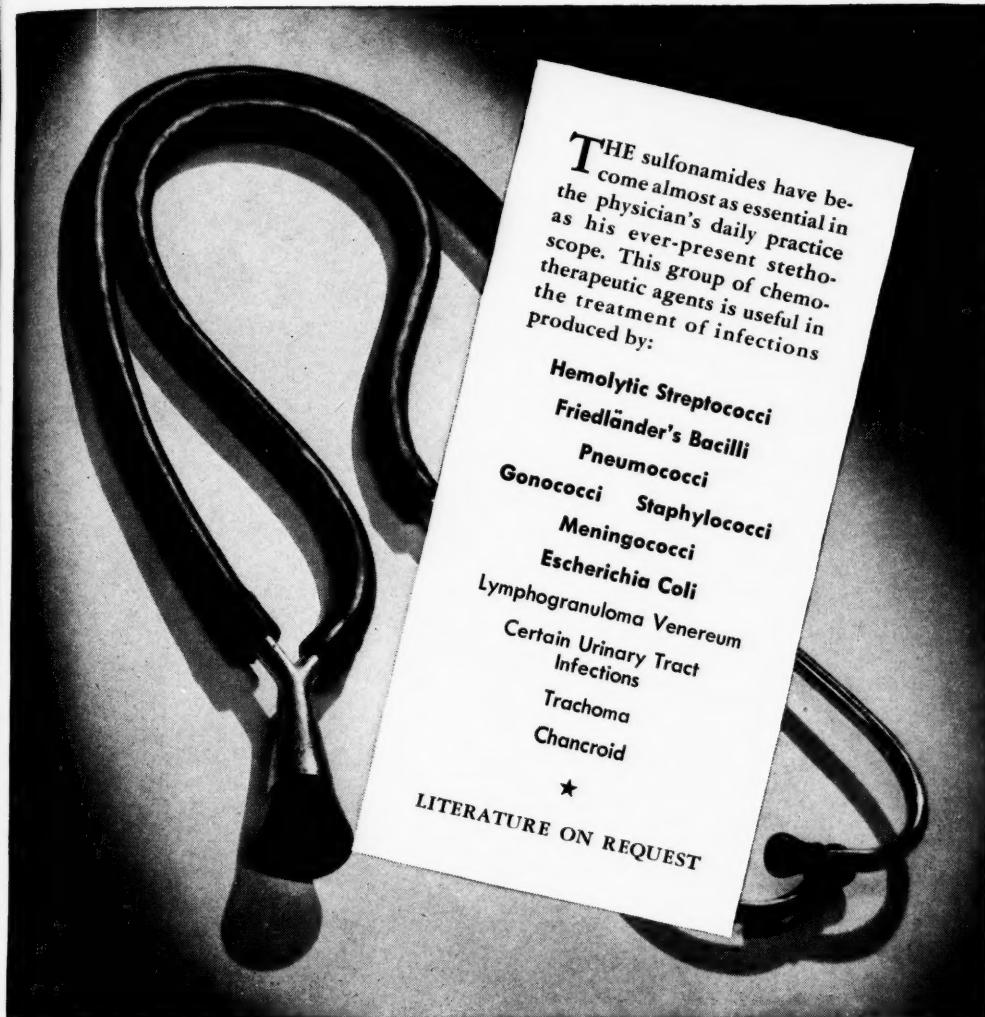
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